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NUCLEAR SHAPE ISOMERS

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We calculate potential-energy surfaces as functions of spheroidal (ϵ_2), hexadecapole (ϵ_4), and axial-asymmetry (γ) shape coordinates for 7206 nuclei from $A = 31$ to $A = 290$. We tabulate the deformations and energies of all minima deeper than 0.2 MeV *and* of the saddles between all pairs of minima. The tabulation is terminated at $N = 160$. Our study is based on the FRLDM macroscopic-microscopic model defined in Atomic Data and Nuclear Data Tables [**59**, 185 (1995)]. We also present potential-energy contour plots versus ϵ_2 and γ for 1224 even-even nuclei in the region studied. We can identify nuclei for which a *necessary* condition for *shape isomers* occurs, namely multiple minima in the calculated potential-energy surface. We find that the vast majority of nuclear shape isomers occur in the $A = 80$ region, the $A = 100$ region, and in a more extended region centered around ^{208}Pb. A calculated region of shape isomers that has so far not been extensively explored is the region of neutron-deficient actinides "north-east" of ^{208}Pb.

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Contents

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1 INTRODUCTION

In a previous issue of Atomic Data and Nuclear Data Tables we presented a calculation of nuclear ground-state masses and deformations for 8979 nuclei ranging from ^{16}O to ^{339}136 and extending from the proton drip line to the neutron drip line [1]. The calculation was based on the macroscopic-microscopic approach. The microscopic corrections were obtained from single-particle levels calculated in a folded-Yukawa single-particle potential [2] by use of the Strutinsky method [3, 4]. Residual pairing corrections were calculated in the Lipkin-Nogami approximation [5, 6, 7, 8]. Two 1992 mass tables were provided, both with this microscopic correction, but with the macroscopic contribution to the total potential energy obtained in two different liquid-drop-type models, namely the finite-range droplet model, and the finite-range liquid-drop model. We refer to the macroscopic-microscopic model in which the total potential energy is calculated as a sum of microscopic corrections from folded-Yukawa single-particle levels and a macroscopic energy term from the finite-range droplet model as FRDM(1992). The year in parentheses refers to the year the constants of the macroscopic model were determined and frozen. The potential-energy model in which the macroscopic term is given by the finite-range liquid-drop model is referred to as FRLDM(1992). For the current work we use a slightly modified macroscopic model whose parameters were fixed by a more careful consideration of fission-barrier heights in addition to nuclear masses [9]. This model is labeled FRLDM(2002).

For many nuclei the potential energy versus shape has one or more additional minima over and above the ground-state minimum. In our mass paper [1] only properties of the ground-state minima were tabulated. Here we study the additional minima that sometimes exist. When one of these additional minima is sufficiently deep, then the nucleus may exist in a state corresponding to the energy and shape of this minimum; this state is a shape isomer. The lifetime of the shape isomer will depend on the overlap between the nuclear wave functions of the shape isomer and the ground state, the excitation energy of the shape isomer, and the height of the saddle separating the shape isomer and the ground state. Therefore the presence of multiple minima in calculated potential-energy surfaces can be considered a *necessary* condition for shape isomerism. The scope of this paper is limited to providing a tabulation of calculated nuclear shape coordinates corresponding to all shape-isomeric minima and the energy of these minima. We also provide these properties for the saddles between all pairs of minima. The calculation includes all nuclei between the proton and neutron drip lines from $A = 31$ to $A = 290$, 7206 nuclei in all. Potential-energy-surface models that are the basis for calculating these properties are more global and on a firmer footing than are the models that use the calculated potential-energy surfaces as starting points for estimating isomer half-lives. The half-life models usually contain locally adjusted constants. However, it is our expectation that the characterization of the static properties of the shape isomers obtained from our global, unified, universal, and well-tested model will provide an improved starting point for estimating where shape isomers and their half-lives can be observed experimentally.

We restrict our study here to "ground-state-like" shape isomers, that is we exclude fission isomers. We therefore only consider shapes with spheroidal deformation $\epsilon_2 \leq 0.45$. Furthermore we do not investigate configurations corresponding to rotational, vibrational or single-particle excitations. Energy surfaces calculated at higher angular momentum, which include such excitations, may have additional shape-coexisting energy minima, or sometimes fewer. They appear in different nuclei and at different shapes than those presented in this paper. To determine the occurrence of additional minima of the type we consider here, we calculate nuclear potential-energy surfaces versus spheroidal deformations ϵ_2, axial asymmetry γ, and hexadecapole deformations ϵ_4. Details are given in the next section.

2 CALCULATIONAL DETAILS

For historical reasons and for compatibility with previous calculations we use the Nilsson perturbed-spheroid ϵ shape parameterization. Since its complete specification, including axial asymmetry is quite lengthy and is given in our mass paper [1] we do not repeat it here. Axial asymmetry was not implemented in the computer codes at the time of our mass paper, but this has now been accomplished. A couple of misprints relating to axial asymmetry that occur in equations in Ref. [1] (but which have not migrated to any calculations) are enumerated and corrected in Ref. [10]. We have earlier presented some highlights of the full results we tabulate and display here. In Ref. [10] we discussed reflection and axial asymmetry of the nuclear ground state which only affect relatively limited and localized regions of the nuclear chart. A brief summary of our full results on shape isomers is in Ref. [11]. These two papers are based on the identical potential-energy surfaces we present here and full details of the calculations can be found there [10, 11]; therefore we just summarize a few major points of the calculations here.

The potential-energy surfaces are calculated in a three-dimensional deformation space with $\varepsilon_2 = (0.0, 0.025, \ldots, 0.45)$, $\gamma = (0.0, 2.5, \ldots, 60.0)$, and $\varepsilon_4 = (-0.12, -0.10, \ldots, 0.12)$, altogether 6175 grid points. The results of our shape-isomer calculations up to $N = 160$ are given in the TABLE. Furthermore, we show calculated potential energies for 1224 nuclei as GRAPHS 11–112. These GRAPHS include almost all even-even nuclei in the region studied. Individual, page-size GRAPHS of each of the 7206 nuclei studied are available for download from our web site [12].

From the calculated three-dimensional potential-energy surfaces we generate 7206 two-dimensional contour plots. The contour maps have been constructed in the following way. At each point ϵ_2 and γ we display the lowest energy obtained for the 13 ϵ_4 grid points calculated. We have previously strongly emphasized and again discuss below that such a procedure in general does not give reasonable results in, for example, situations where the surface contains multiple local minima versus ϵ_4 and in some other situations [13, 9, 14]. However, we use the method for the purpose of overview illustration only. All our specific results on minima and separating saddle points are obtained from a complete and appropriate immersion analysis [15, 16, 13, 14] of the full 3D space. These data are used by the plotting program which inserts the location of the minima and saddle points in the contour plots. The minima in the plots are shown as dots and the saddle points as X symbols. We show the contour plots corresponding to most even-even nuclei in GRAPHS 11–112. Only a few nuclei very close to the neutron drip line have been omitted. From the appearance of the surfaces and from our analysis of the full 3D space we conclude that the approximate 2D surfaces provide a good representation of the structure of the full 3D space. However, it is the exact structure of the full 3D space that is presented in the TABLE.

In our calculations we use the same set of single-particle levels to calculate the shell-plus-pairing corrections for several nearby nuclei. We take one additional step to enhance accuracy after the minima and separating saddle points have been determined. The deformations of all these stationary points are used to recalculate the energies at these deformations for the specific nucleus under consideration. Some quantities that depend on Z and N are the single-particle potential radii and depths, the strength of the spin-orbit force and the pairing strength which are all smoothly and slowly varying functions of Z and N. Thus, in the recalculation these quantities assume exactly their proper values for this nucleus and the shell-plus-pairing corrections are calculated from the precise levels obtained. This strategy is based on the assumption that the locations of minima or saddles are less sensitive to parameter variations than the energy itself. We have performed numerous checks of this assumption and it is fulfilled to a very high degree. We used the same procedure to calculate our mass table [1]. Once we have recalculated the energies we generate a table of saddle points and minima identical in form to the original approximate table, except for the values of the energies of the minima and saddle points. In a few pathological cases where the original minimum was very shallow its recalculated energy may be higher than the saddle that was originally found to stabilize the minimum, that is the minimum does not exist when the precise

parameters for the nucleus under study are used. We scan the table for such occurrences and eliminate those and generate a slightly smaller table. Finally we use this table as a starting point and generate new tables that meet minimum-depth criteria for the minima that are included. We generate three such tables with minimum depth criteria of 0.05 MeV, 0.2 MeV, and 0.5 MeV. It is the saddle-point energies and energy of minima corresponding to the minimum-depth criterion of 0.2 MeV that are tabulated in the TABLE. There can therefore be some (usually small) differences between the energies of the contour plots and the energy values in the TABLE. Furthermore, in the contour plots we mark minima that are deeper than 0.05 MeV, and their corresponding saddle points. Therefore there may be more minima indicated in the contour GRAPHS 11–112 than are actually tabulated. The absolute energy values in the TABLE and GRAPHS 11–112 can sometimes differ by a few hundred keV, but the relative energy differences between minima and saddle points are much less affected. Because we used the identical procedure to calculate our mass table this approach is necessary and desirable to assure seamless matching between our results here and the corresponding mass table. There may be some small differences between the calculated potential-energy surfaces shown here and those published earlier. These occur because the heavier nuclei require more grid points in the numerical integrations of the matrix elements due to the larger number of nodes in the wave functions. In the calculation here we have recalculated all potential-energy surfaces with the larger number of integration points, which may lead to some insignificant differences between the current contour maps and those few published earlier for lighter nuclei.

We emphasize again that *although we use* minimization to reduce our 3-dimensional potential-energy surfaces to two-dimensional, we do it for the sole purpose of plotting contour diagrams for approximate illustration of the structure of the potential-energy surfaces. Actual numbers presented in this article, including those given in the TABLE are determined from considering the full 3D space. The saddle points between minima have been determined by immersion in this full 3D space [11].

3 RESULTS OVERVIEW

In GRAPH 1 we show four calculated contour maps that illustrate typical features of nuclear potential-energy surfaces, features that vary considerably from nucleus to nucleus. We discuss the surfaces in the clockwise order they are numbered.

A very typical situation is illustrated by ^{154}Sm. There exists only one minimum, the prolate ground state at $\varepsilon_2 = 0.25$ and $\gamma = 0.0$ with energy $E = 0.021$ MeV. If axially asymmetric shapes had not been considered, we would only have known the energy along the upper ($\gamma = 60^o$, oblate shapes) and lower ($\gamma = 0^o$, prolate shapes) lines and incorrectly concluded that an oblate minimum at $\varepsilon_2 = 0.225$ and $\gamma = 60^o$ and with $E = 4.5$ MeV also existed, separated from the prolate minimum by a maximum with energy $E = 8.2$ MeV at spherical shape.

However, for other nuclei separate oblate and prolate minima may exist simultaneously, so-called oblate-prolate shape isomerism. This is illustrated by the ^{98}Sr potential-energy surface in the second subplot of GRAPH 1. Here one oblate and one prolate minimum are present. The prolate minimum at $\varepsilon_2 = 0.325$ and $\gamma = 0.0^o$ is the deeper minimum with $E = 2.225$ MeV and is consequently the ground state. A higher minimum, by topographical necessity separated from the lower minimum by a saddle, is located at $\varepsilon_2 = 0.300$ and $\gamma = 60.0$ with $E = 4.205$ MeV. The axially-asymmetric saddle is located at $\varepsilon_2 = 0.275$ and $\gamma = 40.0^o$ with $E = 4.738$ MeV.

Triple shape coexistence or isomerism is also possible. An experimental observation in ^{186}Pb of this type of shape isomerism and a corresponding calculated potential-energy surface were published in 2000 [17]. Our calculated potential-energy surface for ^{186}Pb is very similar to the calculations presented in [17] with a spherical ground state and shallow minima for deformed prolate and oblate shapes. However, as is seen in GRAPH 74 our potential energy for ^{186}Pb exhibits *five* minima, some of them quite shallow. We show in the third subplot of GRAPH 1 a calculated surface for

^{70}Kr which exhibits a somewhat different type of triple shape coexistence. Here the ground state at $\varepsilon_2 = 0.325$ and $\gamma = 60.0^o$ with $E = 3.476$ is oblate. Two shape-isomeric minima are also obtained. The one located at $\varepsilon_2 = 0.200$ and $\gamma = 0.0^o$ with an energy $E = 4.143$ MeV corresponds to a prolate nuclear shape, whereas at the third, slightly higher minimum at $\varepsilon_2 = 0.375$ and $\gamma = 20.0^o$ with $E = 4.185$ MeV the nucleus is triaxial in shape. Three saddle points also exist and are indicated by crossed lines.

For some nuclei we find that the ground state is axially asymmetric. A typical result, for ^{138}Sm, is shown in the fourth subplot of GRAPH 1. There is only one minimum in this surface but if the calculations had been restricted to axially symmetric shapes, one oblate and one prolate minimum would have been found. Neither of these energy minima survive when axial-asymmetric shapes are considered. Both turn out to be saddle points if the plot is reflected to angles outside the range $0 \leq \gamma \leq 60$. The true minimum is found in the interior of the (ε, γ) plane. In contrast to the previous three cases, the calculated ground-state mass for ^{138}Sm is lowered due to the inclusion of triaxial shapes, by about 0.4 MeV. We have previously shown that the agreement between calculated and measured masses is improved when axial asymmetry is taken into account in the calculations [18].

The symmetry properties of the nuclear ground-state shape are perhaps most clearly and simply revealed through characteristics of low-lying collective energy-level spectra. Collective spectra are energy levels that arise due to excitation or motion of the whole nucleus in a coordinated and coherent fashion, in contrast to excitations of individual protons or neutrons into higher single-particle-type energy levels. Typical collective excitations are vibrations and rotations of the nucleus. In GRAPH 2 we show experimental collective level spectra [19] for four nuclei, representing typical classes of nuclear shapes; a sphere and three types of shapes that break spherical symmetry, namely spheroidal, reflection-asymmetric, and axially-asymmetric (triaxial) shapes. Next to the level spectra we show for these specific nuclei calculated ground-state shapes. The characteristic appearance of these spectra can be understood from quantum mechanics, as implemented through the collective model of Bohr and Mottelson[20, 21]. The Pauli principle and the requirement that the nuclear wave function is anti-symmetric have the consequence that only levels with certain spins (different in the four situations) appear. Some key characteristics are that (a) the spherical spectrum is vibrational with an expected energy ratio between the second and first excited level, $E(4^+)/E(2^+)$, close to 2, and (b) the spheroidal spectrum is rotational with an energy ratio $E(4^+)/E(2^+)$ close to $[4(4+1)]/[2(2+1)] = 10/3 = 3.33$. Furthermore, the laws of quantum mechanics have the consequence that spherical nuclei cannot rotate and spheroidal nuclei can only rotate around an axis perpendicular to the symmetry axis. When reflection symmetry is broken additional, low-lying negative-parity states appear and when axial symmetry is broken γ bands with the characteristics shown in GRAPH 2 will appear. In GRAPH 2 the spheroidal spectrum corresponds to an energy surface similar to subplot (1) in GRAPH 1; the axially asymmetric spectrum corresponds to a structure similar to subplot (4).

Shape isomers are not necessarily associated with some characteristic symmetry breaking, except spheroidal deviations from a spherical shape. But for even-even nuclei with calculated low-lying shape isomers one expects to experimentally observe low-lying 0^+ energy levels corresponding to the energies of the shape-isomer minima. The most common expression of shape isomerism (in even-even nuclei) is that there is one 0^+ ground state and one additional, low-lying 0^+ state. This situation is thought to correspond in a nucleus to two different shape configurations, corresponding to the distinct minima in calculated potential-energy surfaces. In GRAPH 3 we show a few low-lying levels in each of four even-even Kr isotopes and the shapes corresponding to the two minima present in our calculated potential-energy surfaces. We showed in [11] that the energy, relative to the ground state, of the higher of the two calculated minima compares very well to the excitation energy of the second 0^+ level seen in the experimental spectra. As we pointed out in [11], this is a zero-order model; to more accurately calculate the energy levels one needs to go beyond mean field and account for mixing between wave functions corresponding to the two shape configurations.

Rather elaborate calculations implementing such features have been presented, for example in [22, 23, 24, 25, 26, 27, 28, 29]. These efforts mostly utilize purely microscopic models based on two-body effective interactions or density-functional theories. Unfortunately, as of yet such models obtain root-mean-square deviations with respect to experimental masses that are four or more times larger than those resulting from our model. Until this situation improves, approaches such as the one we use should be more reliable for global predictions of the sort we present.

How many nuclei of the almost 9000 represented in our mass table have additional minima in the potential-energy surface, in addition to the ground-state minimum? Because we here focus on ground-state-like minima we only consider deformations with $\epsilon_2 \leq 0.45$. The number of minima that are present in the calculated potential-energy surface of a given nucleus depends on the criteria we select to permit the minimum to be counted as a candidate for a shape-coexisting minimum. In GRAPH 4 we use rather generous criteria. We count all minima that are deeper than 0.05 MeV and at an energy less than 5.0 MeV. By depth 0.05 MeV we mean that the minimum is surrounded by ridges on which all points lie at least 0.05 MeV above the bottom of the minimum. With the above criteria shape isomerism is fairly common. However, for calculated shape-isomeric minima to actually manifest themselves as observable, low-lying 0^+ states the criteria need to be stricter. In GRAPHS 5 and 6 we have used stricter criteria, namely excitation energy 2.0 MeV and depth 0.2 MeV and excitation energy 1.0 MeV and depth 0.2 MeV, respectively. In this case candidates for shape isomerism are mainly restricted to 4 localized regions: $A \approx 80$ nuclei, $A \approx 100$ nuclei, neutron-deficient Pb nuclei, and neutron-deficient actinide nuclei. In addition some nuclei near the $N \approx 120$ line may be reachable in experiments. We can impose additional criteria on which shape isomers we select. In GRAPHS 7 and 8 we show the number of minima with at least one minimum spherical for excitation energies less than 2 MeV and 1 MeV respectively. In GRAPHS 9 and 10 we require that at least one minimum is triaxial.

In GRAPHS 11-112 we present 1224 contour diagrams of most even-even nuclei between the proton and neutron drip lines, from ^{32}Ne to ^{282}118. Here more details about the structure of the potential-energy surfaces and their shape-isomeric minima are visible. It is interesting to study the transitions from magic, spherical nuclei to well-deformed nuclei through a succession of neutron numbers. Finally, we have in the TABLE tabulated the energy and deformations of all minima deeper than 0.2 MeV and the energies and deformations of the optimum saddle points between all pairs of minima.

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EXPLANATION OF GRAPHS

GRAPH 1: Four calculated potential-energy surfaces versus ε_2 and γ (minimized with respect to ε_4). Minima are indicated by colored round dots and saddle points by pairs of crossed lines. The numbers on a blue background give the energy in MeV of the thicker contour lines which are spaced 1 MeV apart; the spacing between the thinner lines is 0.2 MeV. The circular arcs starting at $\epsilon_2 = 0.10$, 0.20, 0.30, and 0.40 and the straight lines ending at $\epsilon_2 = 0.45$ and $\gamma = 20$ and 40 indicate the coordinate grid. To obtain a suitable range of energy values we have, following standard practice, subtracted the energy obtained for a spherical shape in the macroscopic part of the model. The surfaces exhibit typical structures that we obtain in our current investigation. Each point in a surface corresponds to the energy of a specific nuclear shape. The lower left tip of the pie-like plot corresponds to a spherical shape. Points along the $\gamma = 60^\circ$ straight line correspond to oblate shapes (like a discus) and those along the lower $\gamma = 0^\circ$ straight line to prolate shapes (like an American football). The energy values in the interior of the pie are calculated for axially-asymmetric nuclear shapes (a somewhat simplified analogy is that these points correspond to shapes that result from standing on a football). Shapes corresponding to the three minima and one of the saddle points of ^{70}Kr are shown at the top in the colors of the symbols at their respective locations in the contour plot. Shapes at equivalent locations in the other plots are similar, but not identical, due to possible differences in the ε_4 shape coordinate. The axially asymmetric minimum in subplot (3), indicated by a red dot can communicate with the prolate minimum indicated by a green-colored dot across the saddle indicated by short, crossed, gray lines at $\varepsilon_2 = 0.3$ and $\gamma = 0.0$. However, our water-flow analysis program has identified the saddle points indicated by the larger crossed-lines symbols as defining a path between the two minima with a lower maximum energy than the more direct path. For this particular nucleus we can see from the plot that the energy maxima on these two paths only differ by a few tens of keV at most. It is an interesting conjecture, that we at this point are not able to prove generally, that the number of saddle points needed to define optimal paths between n minima is $n - 1$, not $n \times (n - 1)/2$.

GRAPH 2: Typical collective level spectra for a spherical nucleus and for three nuclei with shapes representing the most important types of deviation from spherical symmetry. Each level is labeled by its energy in keV relative to the ground state and its spin and parity. Nuclear ground-state shapes calculated in the macroscopic-microscopic approach both in Ref. [1] and here are shown next to the level spectra (from Ref. [19]). The observed level spectra are consistent with what is expected from the calculated shape asymmetries. Each shape is shown from two viewing angles; one viewing angle is identical for all four shapes, the other is chosen to most clearly display the asymmetry of the shape. In subplots (3) and (4) the levels specifically associated with the broken symmetry have for clarity been shifted towards the right.

GRAPH 3: Observed low-lying energy levels in four Kr isotopes. In each of these even-even nuclei two low-lying 0^+ states are observed. For ^{72}Kr the ground-state shape is oblate; for the other three isotopes it is prolate, whereas it is the shape-isomeric state that is oblate. The figure is based on information in Ref. [30] and references quoted therein. For a more detailed discussion see [11]. In each subplot we show the calculated shape corresponding to the oblate minimum (on the left) and the prolate minimum (to the right).

GRAPH 4: Number of minima deeper than 0.05 MeV and excitation energy less than 5.0 MeV for 5900 nuclei from $A = 31$ to $N = 160$.

GRAPH 5: Number of minima deeper than 0.2 MeV and excitation energy less than 2.0 MeV for 5900 nuclei from $A = 31$ to $N = 160$.

GRAPH 6: Number of minima deeper than 0.2 MeV and excitation energy less than 1.0 MeV for 5900 nuclei from $A = 31$ to $N = 160$.

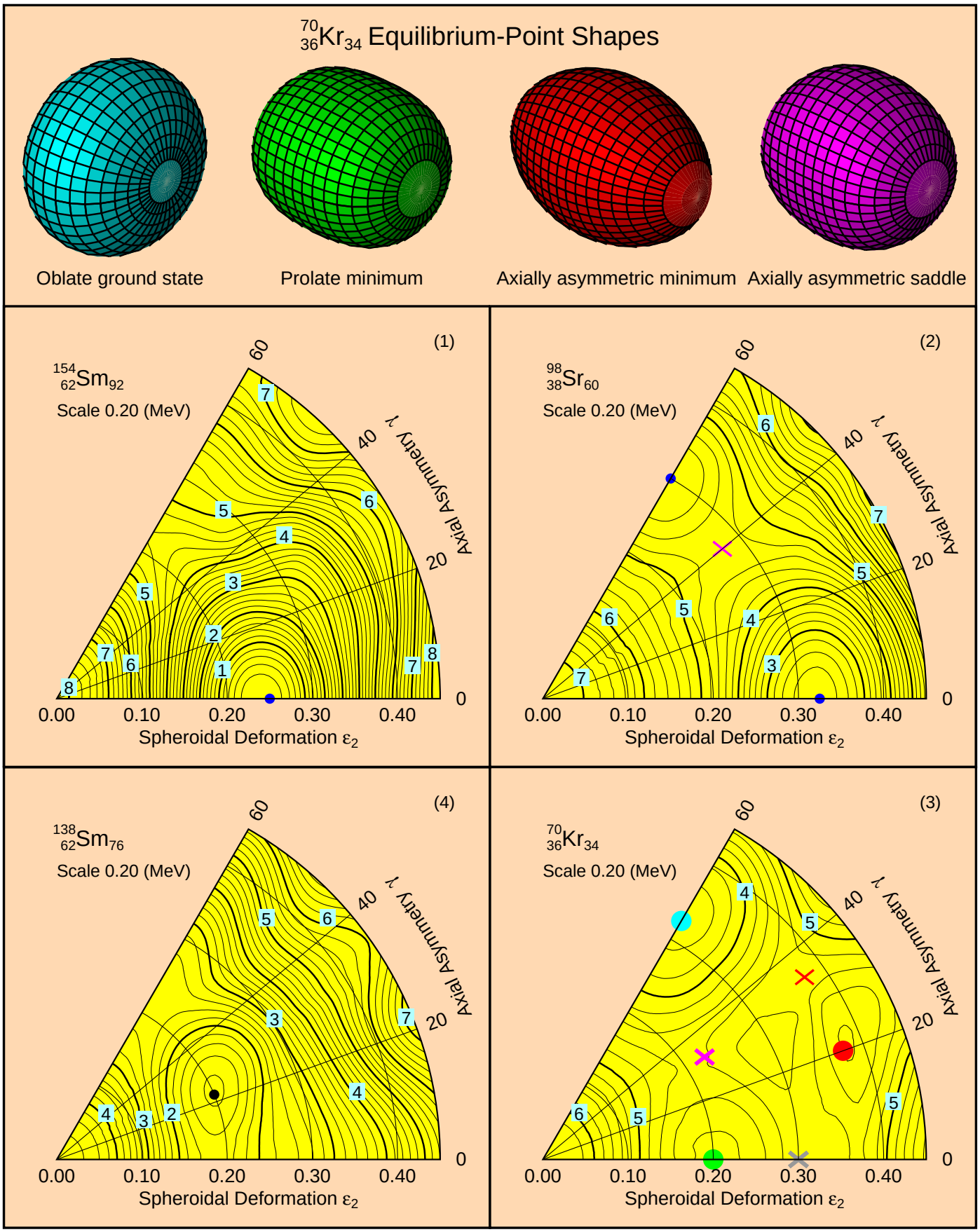
GRAPH 7: Number of minima deeper than 0.2 MeV and excitation energy less than 2.0 MeV for 5900 nuclei from $A = 31$ to $N = 160$, with at least one minimum corresponding to a spherical shape.

GRAPH 8: Number of minima deeper than 0.2 MeV and excitation energy less than 1.0 MeV for 5900 nuclei from $A = 31$ to $N = 160$, with at least one minimum corresponding to a spherical shape.

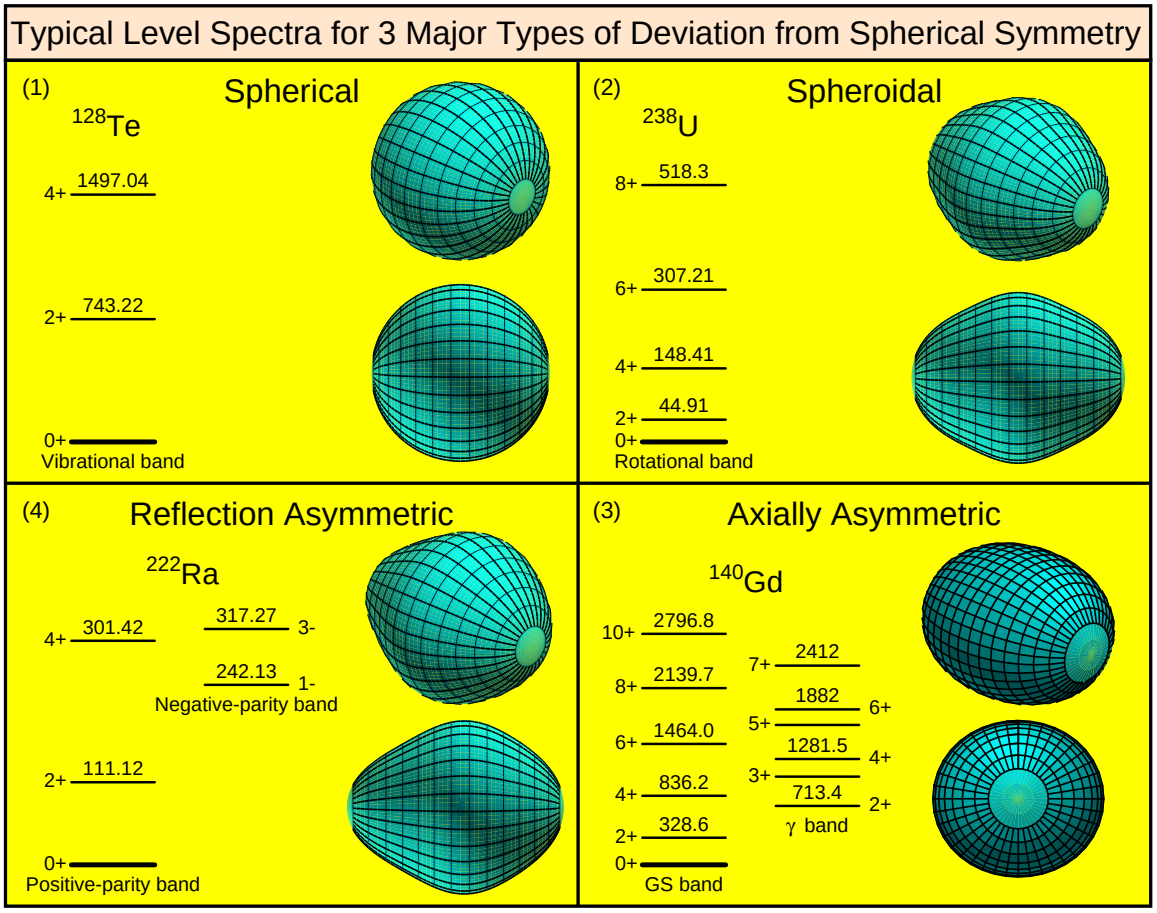
GRAPH 9: Number of minima deeper than 0.2 MeV and excitation energy less than 2.0 MeV for 5900 nuclei from $A = 31$ to $N = 160$, with at least one minimum corresponding to a triaxial shape.

GRAPH 10: Number of minima deeper than 0.2 MeV and excitation energy less than 1.0 MeV for 5900 nuclei from $A = 31$ to $N = 160$, with at least one minimum corresponding to a triaxial shape.

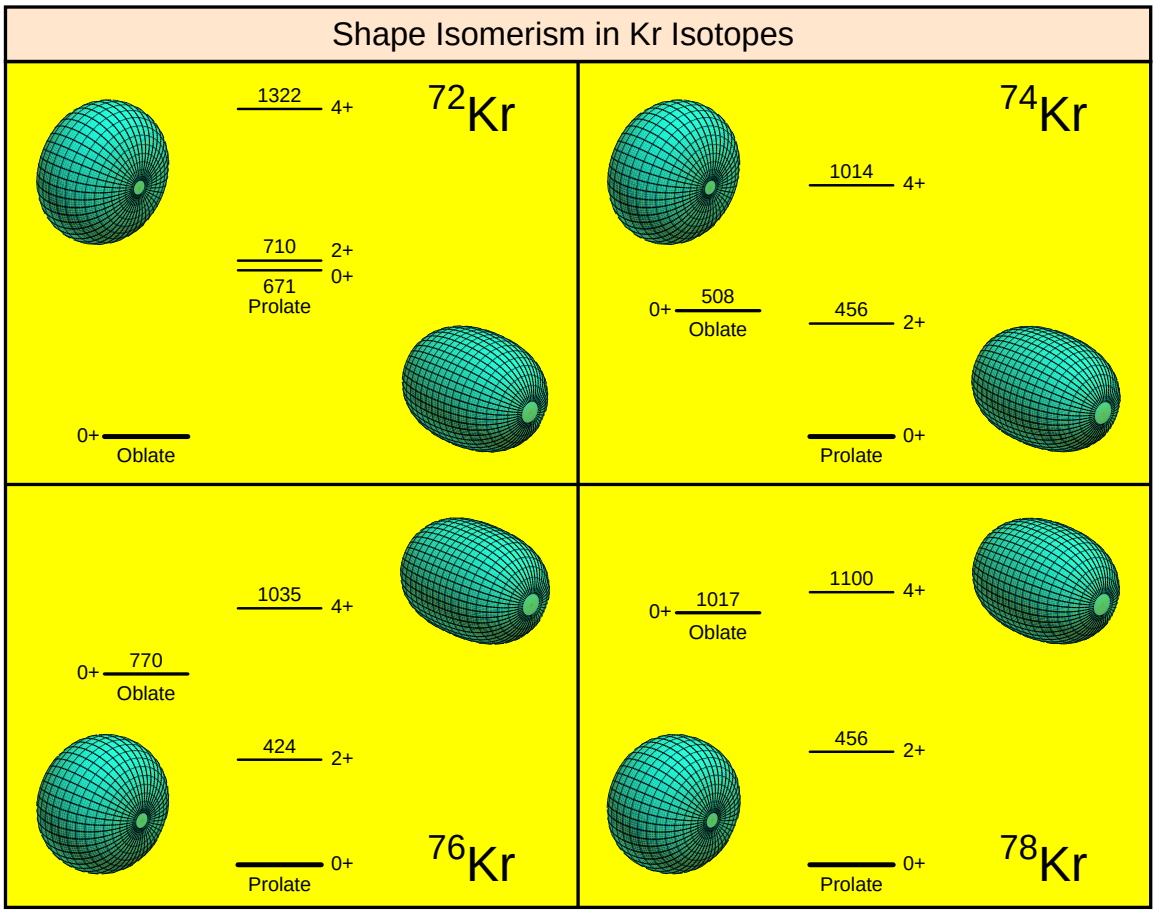
GRAPHS 11–122: Calculated potential-energy surfaces for 1224 even-even nuclei from $A = 32$ to $A = 290$ from the proton drip line to close to the neutron drip line. The contour maps are grouped together 12 on each page. Every fifth contour line is marked with the energy relative to the spherical macroscopic energy.


$^{70}_{36}Kr_{34}$ Equilibrium-Point Shapes
Oblate ground state
Prolate minimum
Axially asymmetric minimum
Axially asymmetric saddle
(1)
$^{154}_{62}Sm_{92}$
Scale 0.20 (MeV)
(2)
$^{98}_{38}Sr_{60}$
Scale 0.20 (MeV)
(4)
$^{138}_{62}Sm_{76}$
Scale 0.20 (MeV)
(3)
$^{70}_{36}Kr_{34}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00
0.10
0.20
0.30
0.40
0
20
40
60

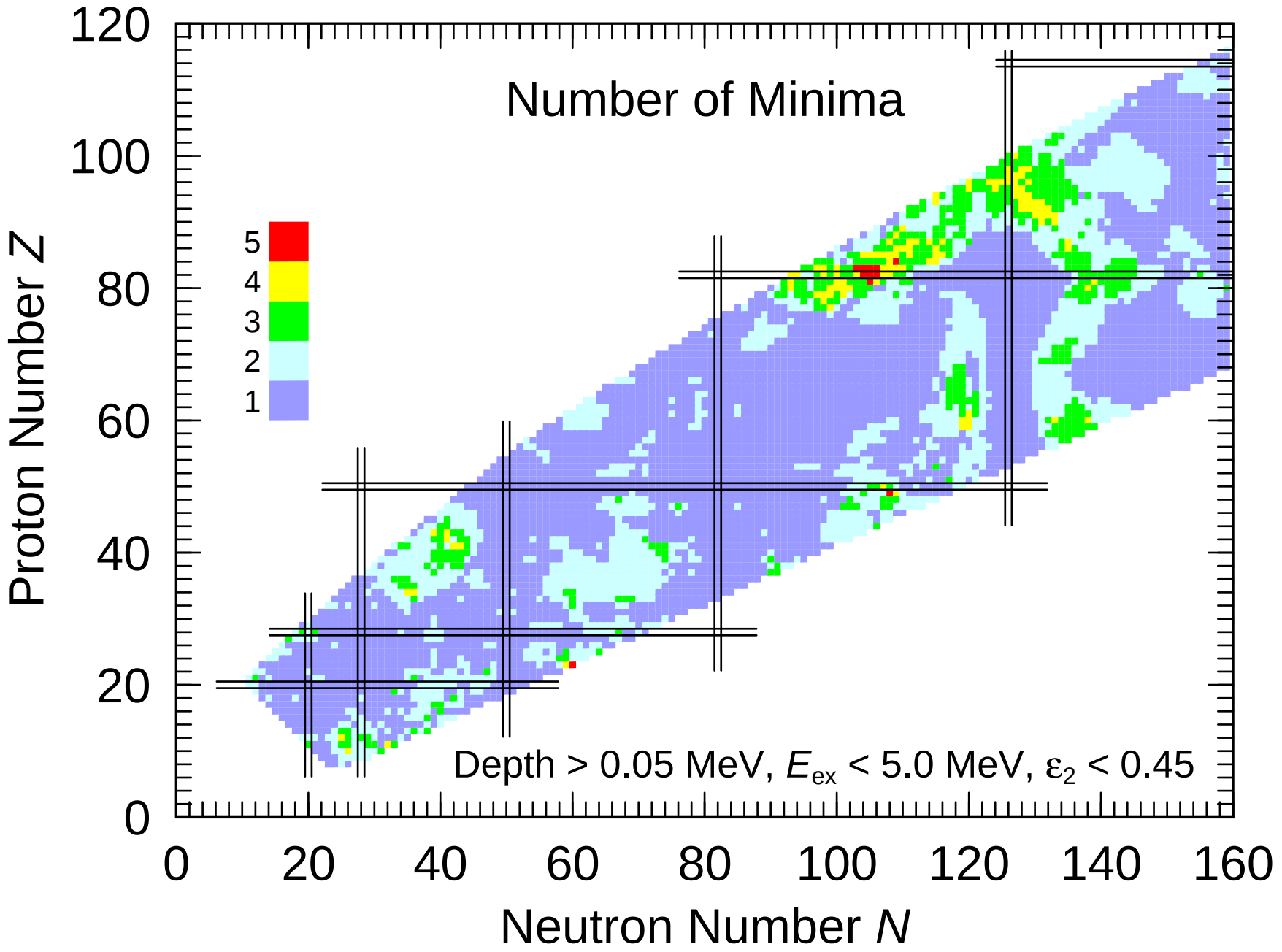
Graph 1



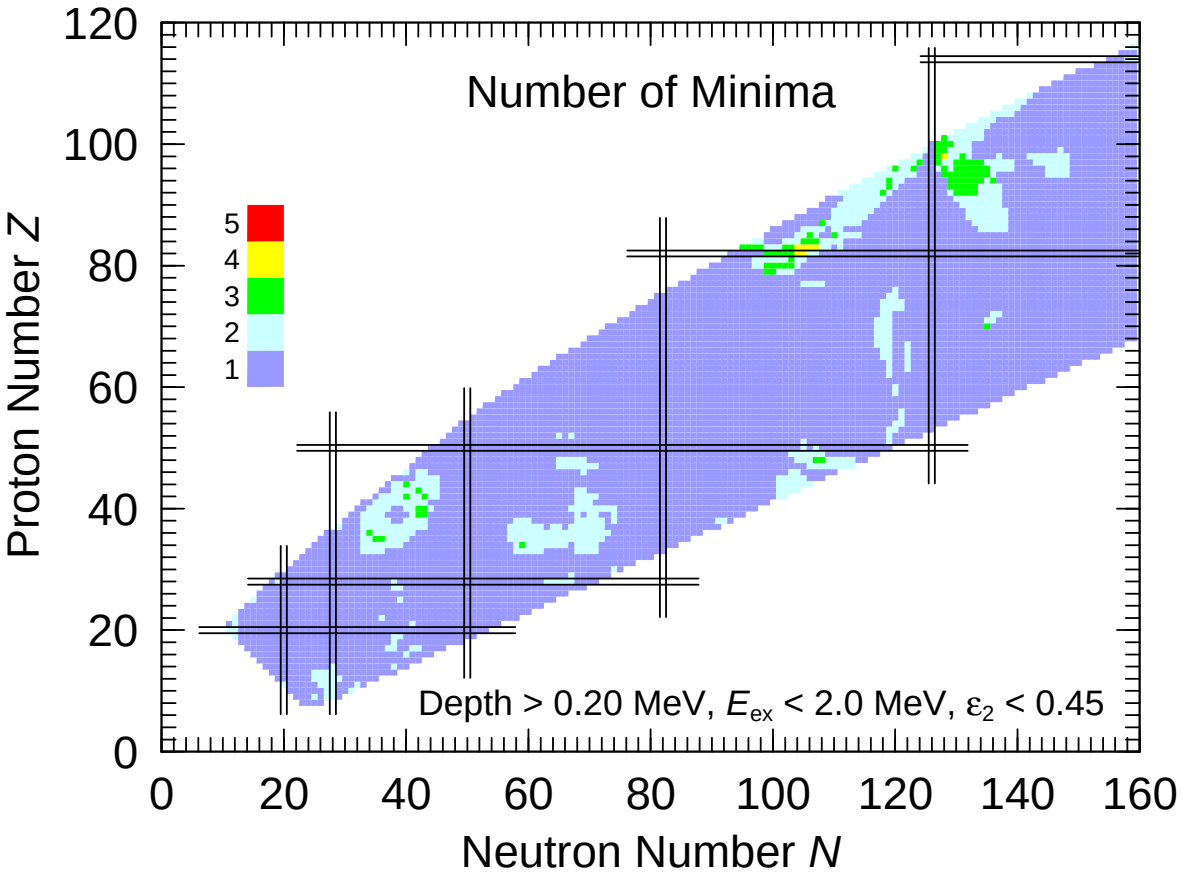
Graph 2



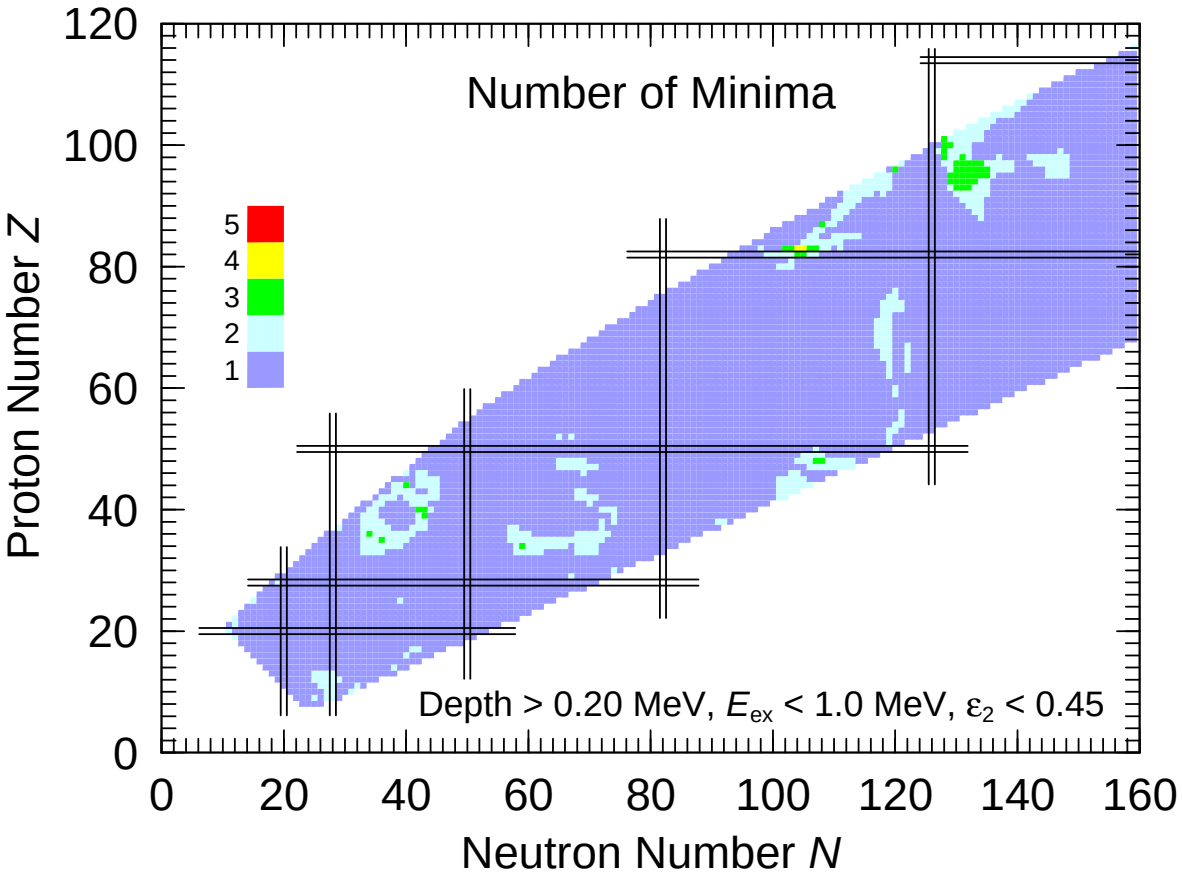
Graph 3


Number of Minima
5
4
3
2
1
Depth > 0.05 MeV, E_{ex} < 5.0 MeV, ε_2 < 0.45
Proton Number Z
Neutron Number N
0
20
40
60
80
100
120
140
160

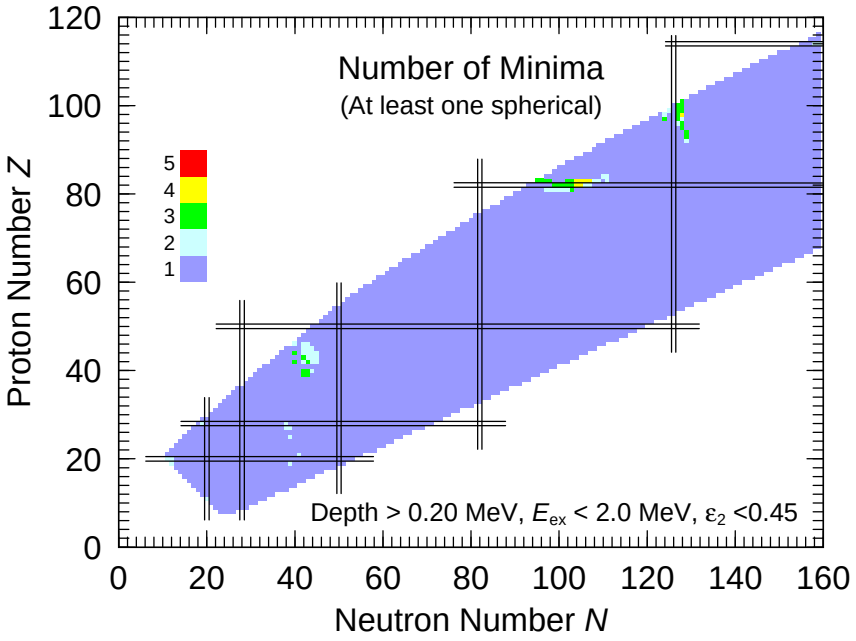
Graph 4



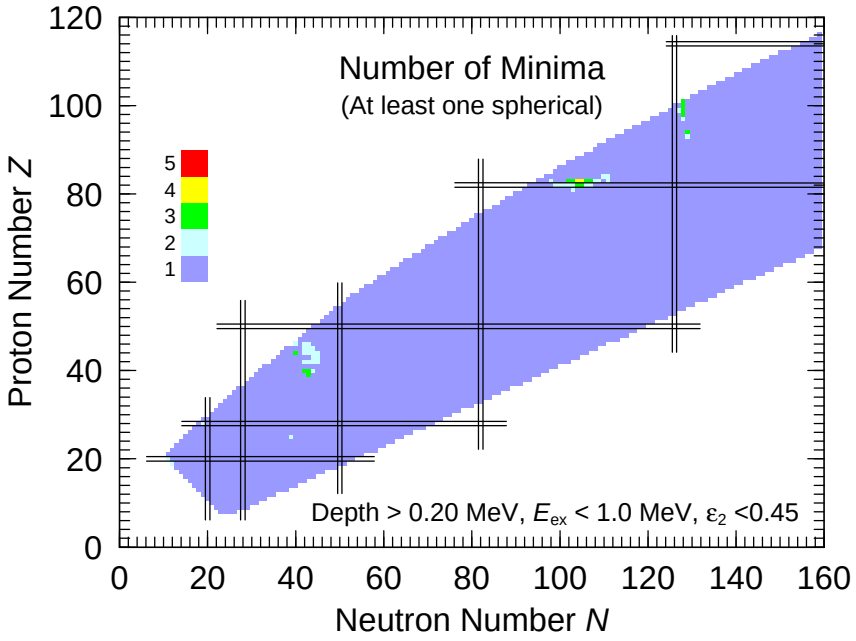
Graph 5



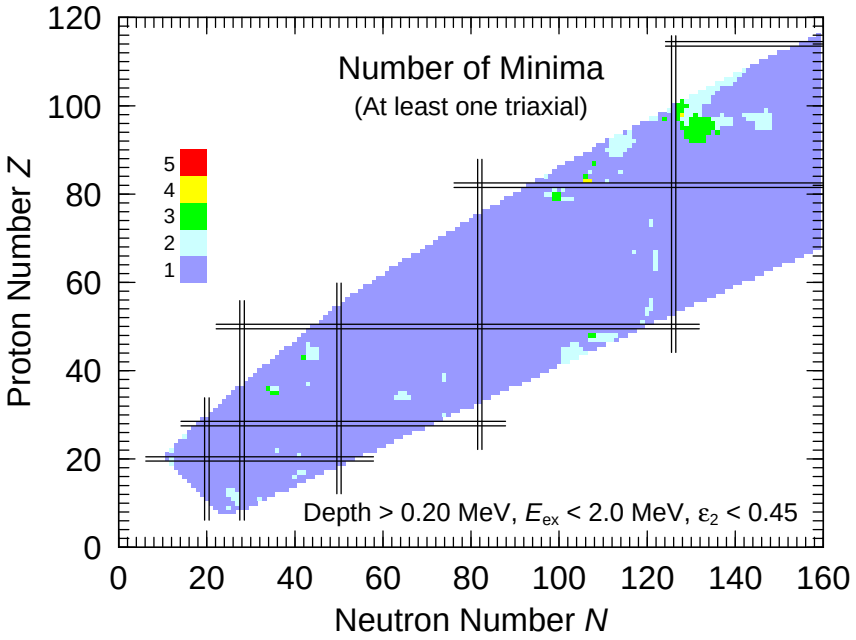
Graph 6



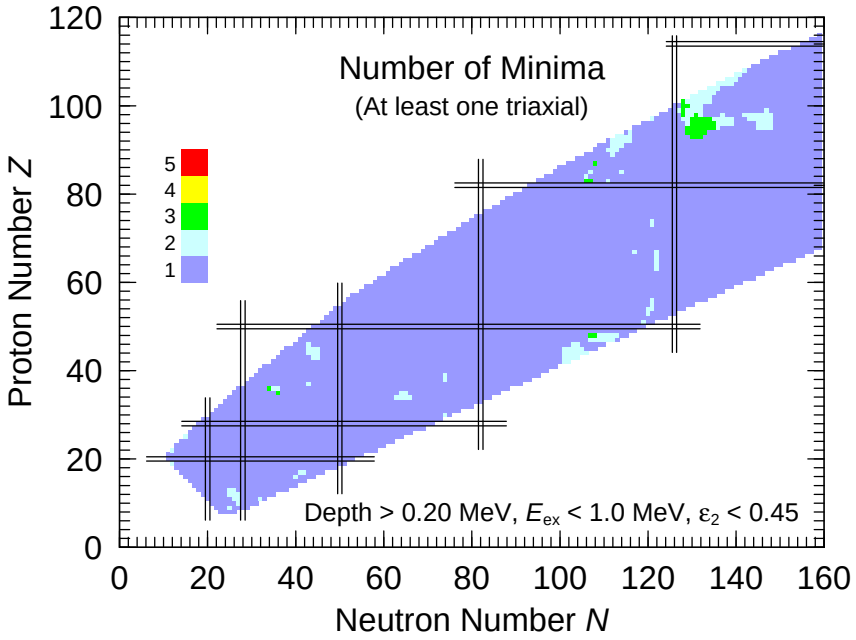
Graph 7



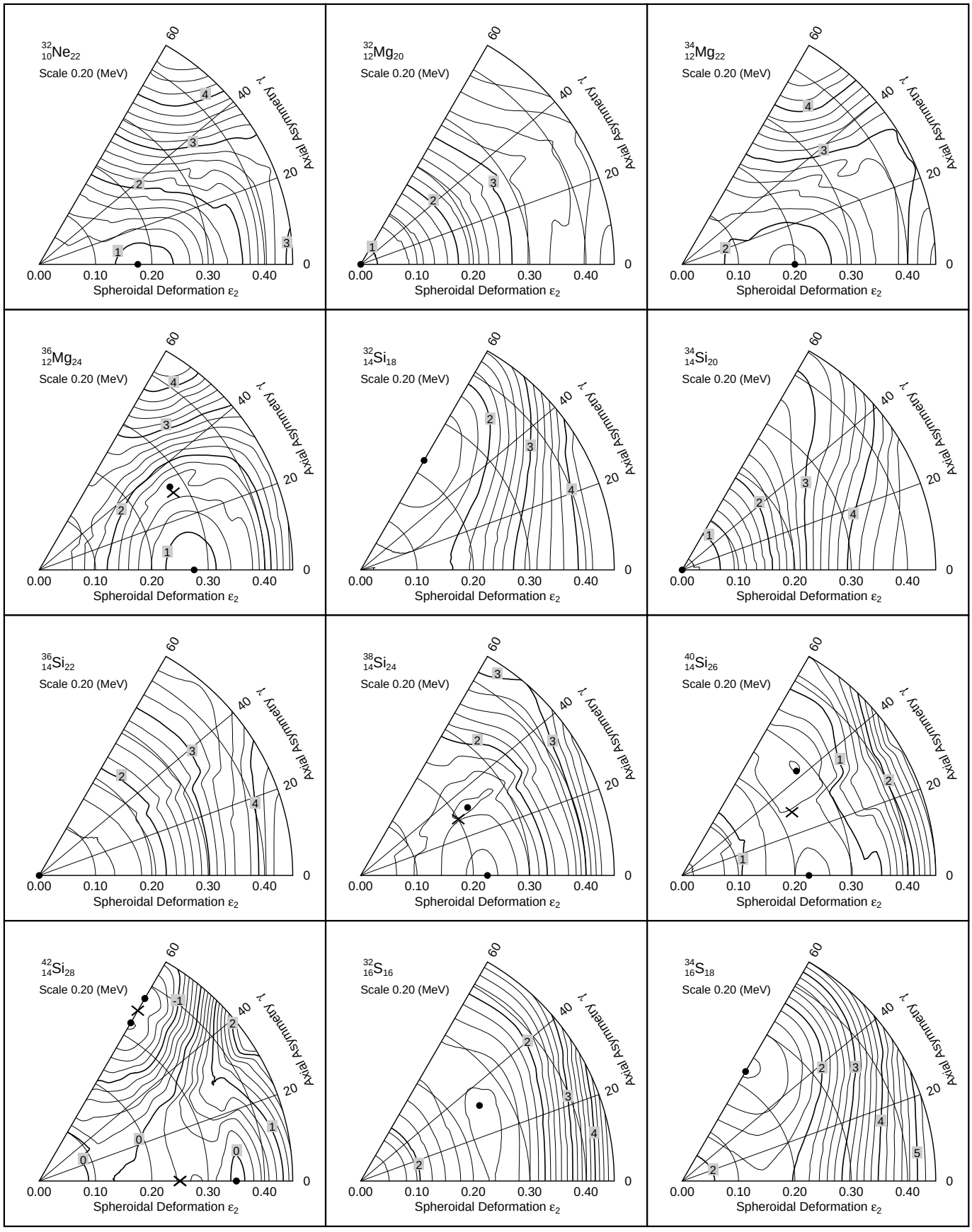
Graph 8



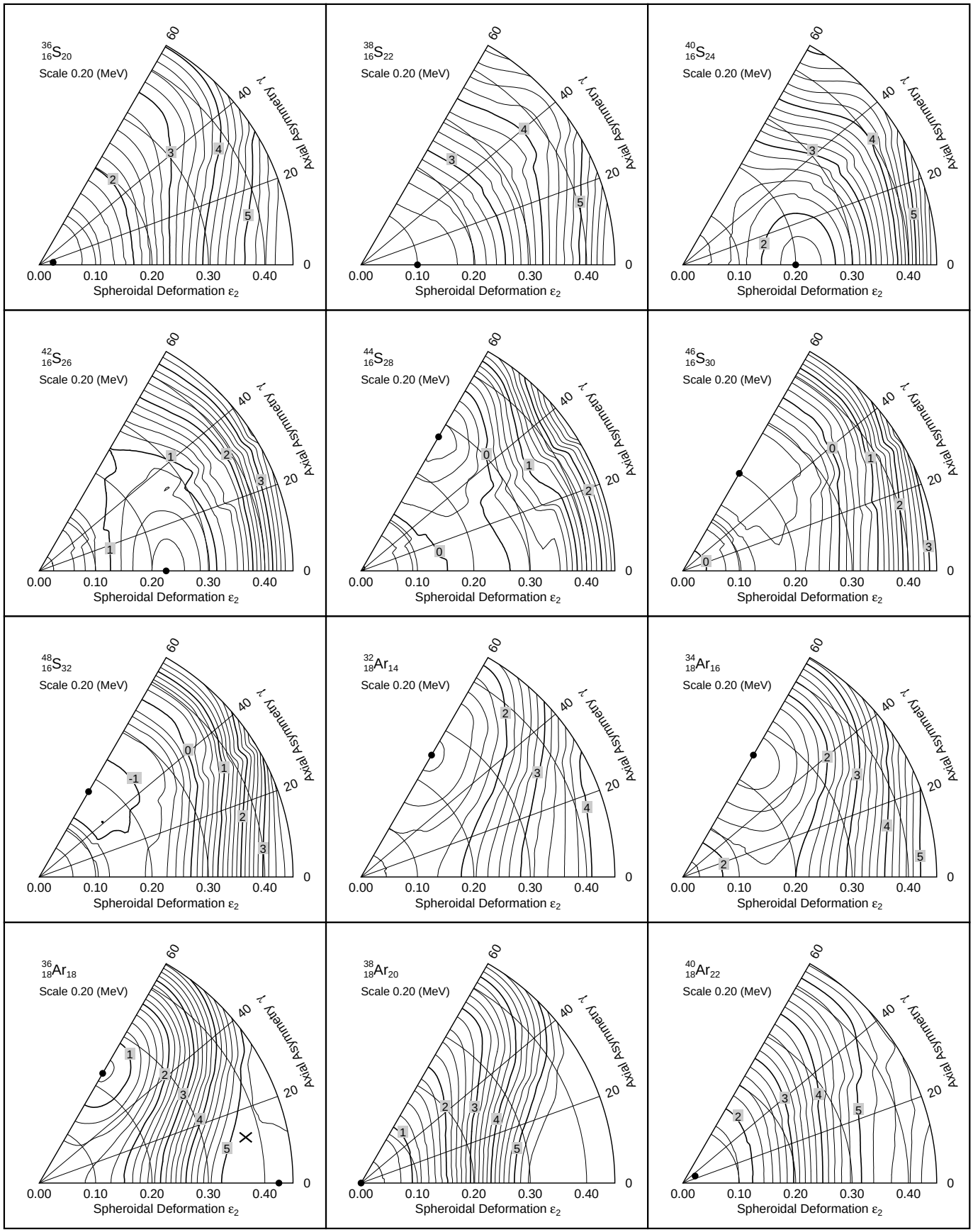
Graph 9



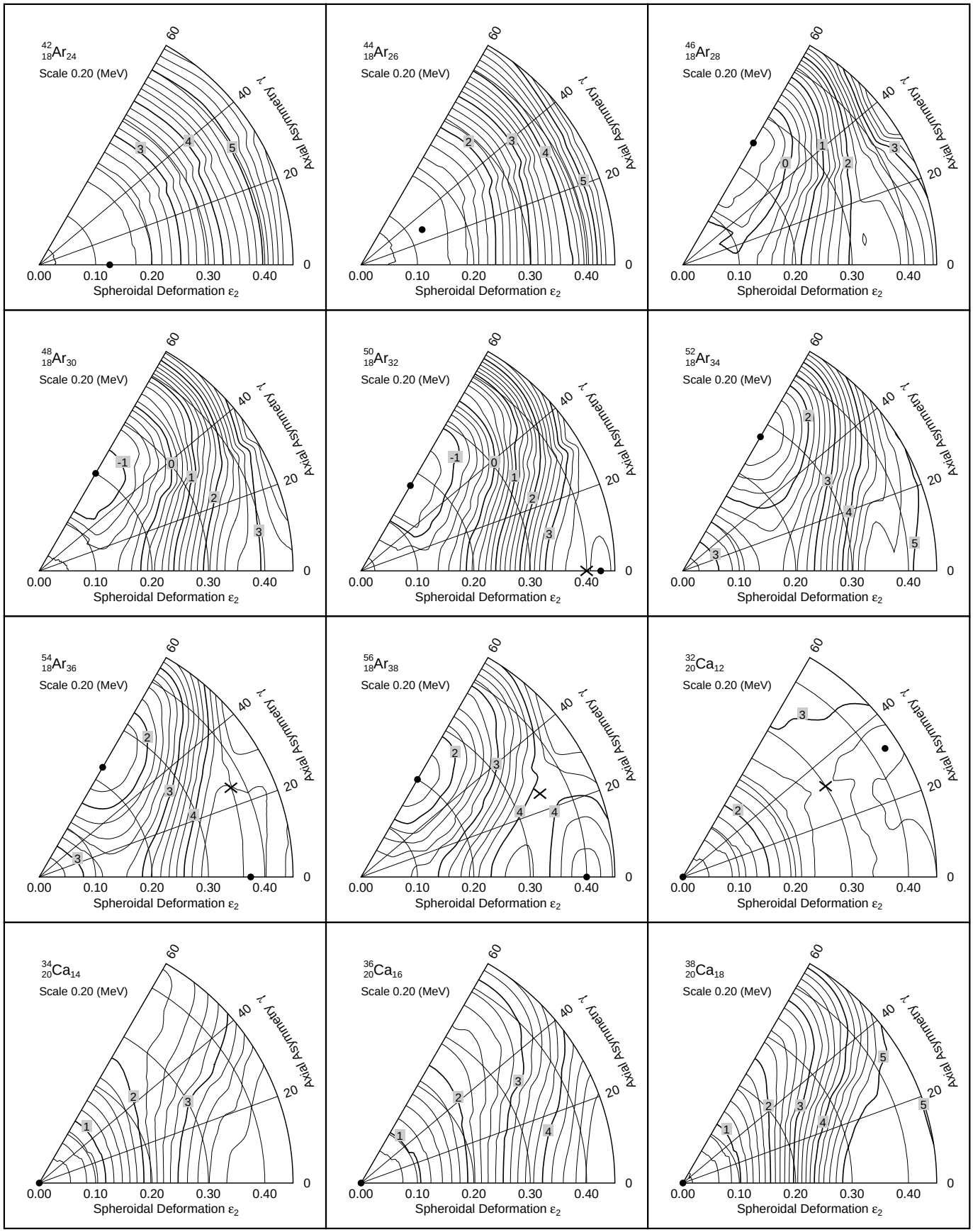
Graph 10


$^{32}_{10}Ne_{22}$
$^{32}_{12}Mg_{20}$
$^{34}_{12}Mg_{22}$
$^{36}_{12}Mg_{24}$
$^{32}_{14}Si_{18}$
$^{34}_{14}Si_{20}$
$^{36}_{14}Si_{22}$
$^{38}_{14}Si_{24}$
$^{40}_{14}Si_{26}$
$^{42}_{14}Si_{28}$
$^{32}_{16}S_{16}$
$^{34}_{16}S_{18}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

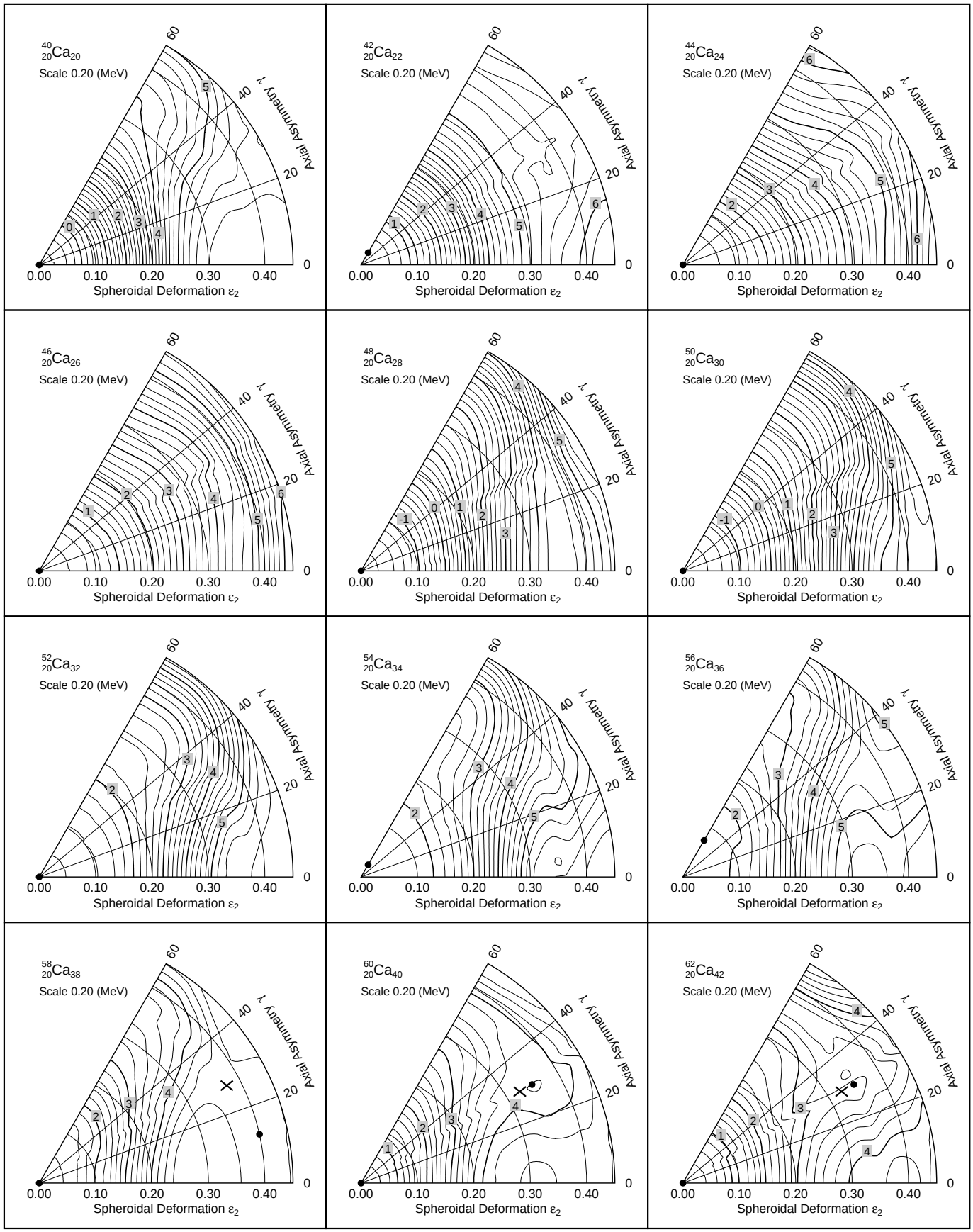
Graph 11


$^{36}_{16}S_{20}$
$^{38}_{16}S_{22}$
$^{40}_{16}S_{24}$
$^{42}_{16}S_{26}$
$^{44}_{16}S_{28}$
$^{46}_{16}S_{30}$
$^{48}_{16}S_{32}$
$^{32}_{18}Ar_{14}$
$^{34}_{18}Ar_{16}$
$^{36}_{18}Ar_{18}$
$^{38}_{18}Ar_{20}$
$^{40}_{18}Ar_{22}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

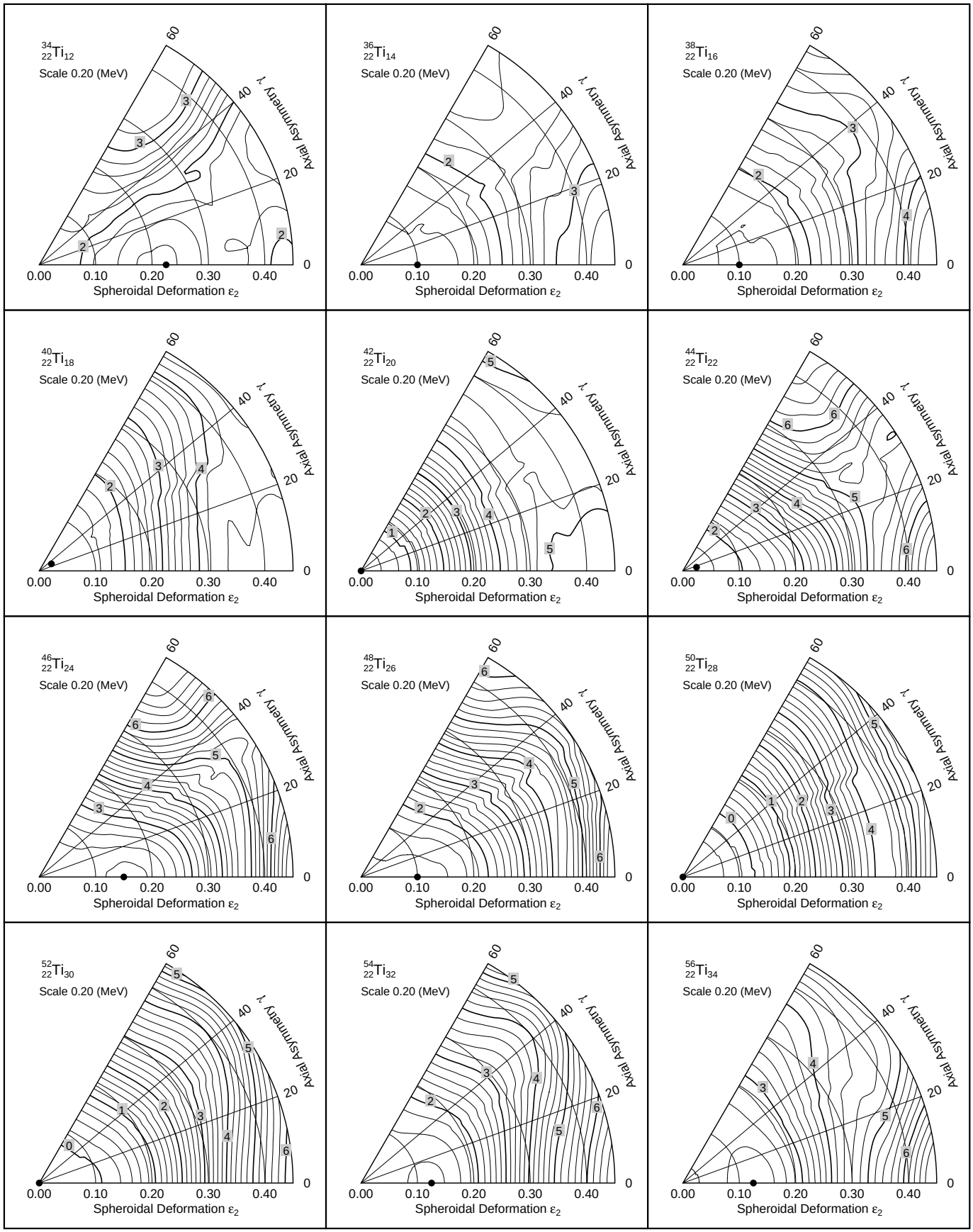
Graph 12


$^{42}_{18}Ar_{24}$
$^{44}_{18}Ar_{26}$
$^{46}_{18}Ar_{28}$
$^{48}_{18}Ar_{30}$
$^{50}_{18}Ar_{32}$
$^{52}_{18}Ar_{34}$
$^{54}_{18}Ar_{36}$
$^{56}_{18}Ar_{38}$
$^{32}_{20}Ca_{12}$
$^{34}_{20}Ca_{14}$
$^{36}_{20}Ca_{16}$
$^{38}_{20}Ca_{18}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

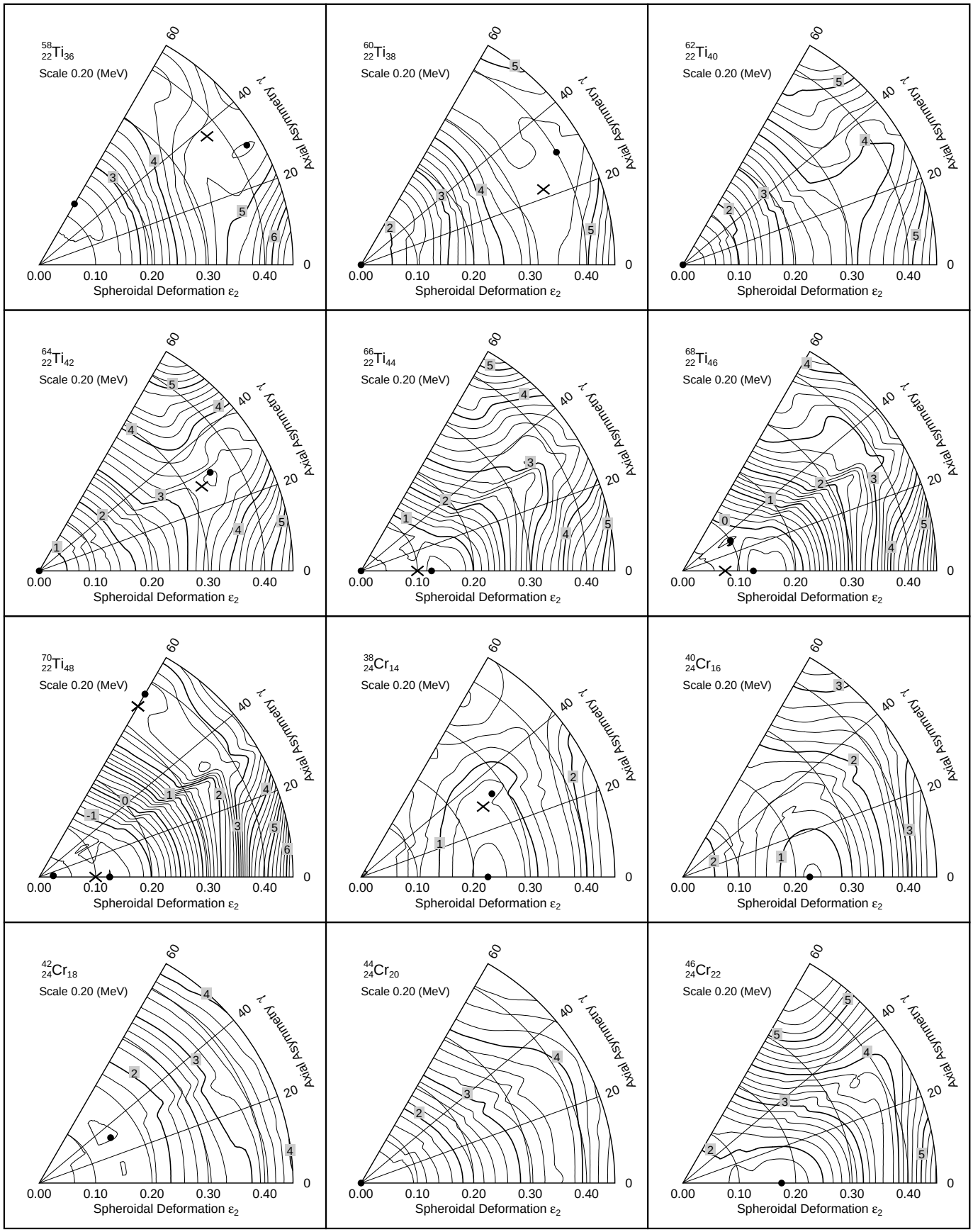
Graph 13


$^{40}_{20}Ca_{20}$
$^{42}_{20}Ca_{22}$
$^{44}_{20}Ca_{24}$
$^{46}_{20}Ca_{26}$
$^{48}_{20}Ca_{28}$
$^{50}_{20}Ca_{30}$
$^{52}_{20}Ca_{32}$
$^{54}_{20}Ca_{34}$
$^{56}_{20}Ca_{36}$
$^{58}_{20}Ca_{38}$
$^{60}_{20}Ca_{40}$
$^{62}_{20}Ca_{42}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

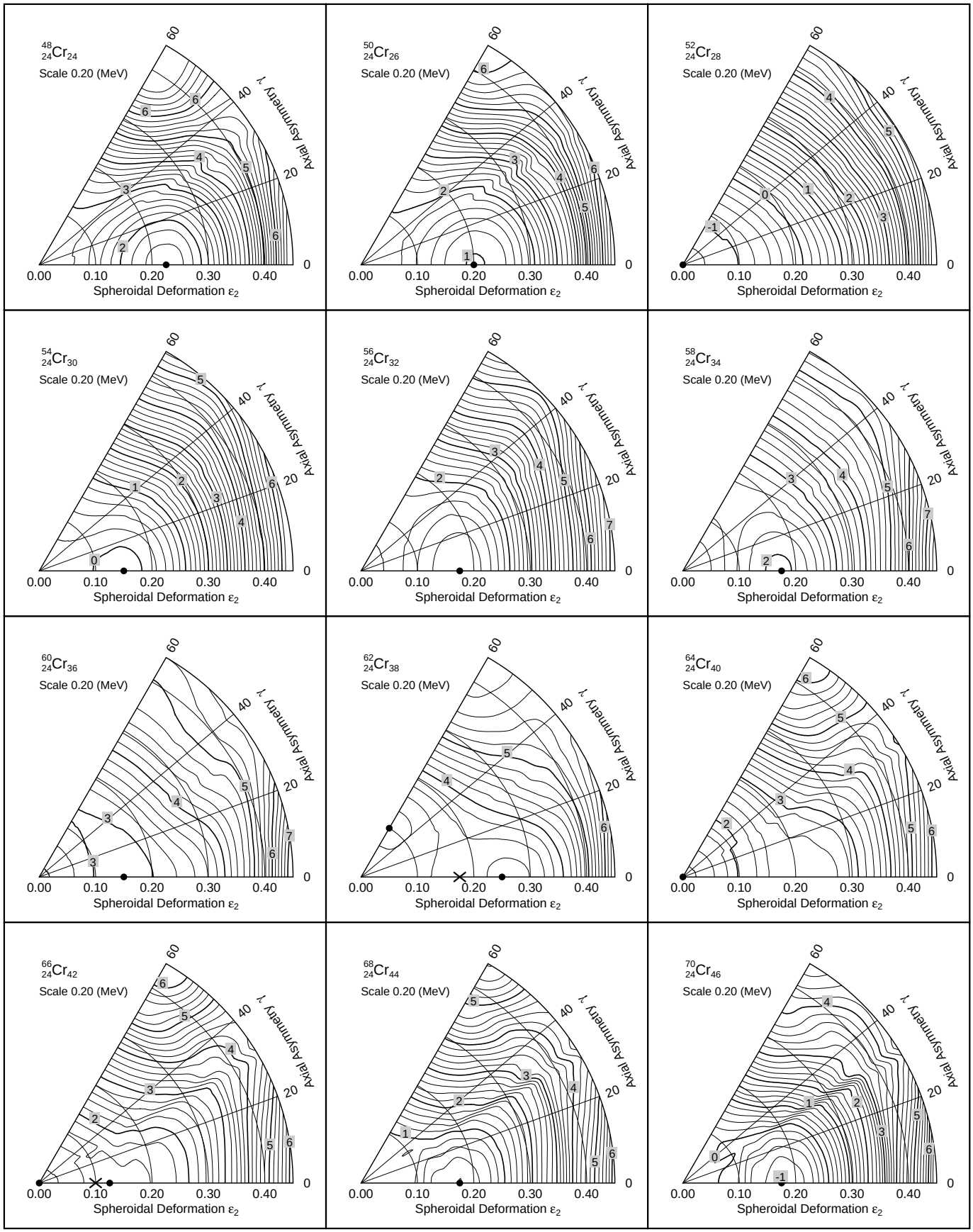
Graph 14


$^{34}_{22}Ti_{12}$
$^{36}_{22}Ti_{14}$
$^{38}_{22}Ti_{16}$
$^{40}_{22}Ti_{18}$
$^{42}_{22}Ti_{20}$
$^{44}_{22}Ti_{22}$
$^{46}_{22}Ti_{24}$
$^{48}_{22}Ti_{26}$
$^{50}_{22}Ti_{28}$
$^{52}_{22}Ti_{30}$
$^{54}_{22}Ti_{32}$
$^{56}_{22}Ti_{34}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

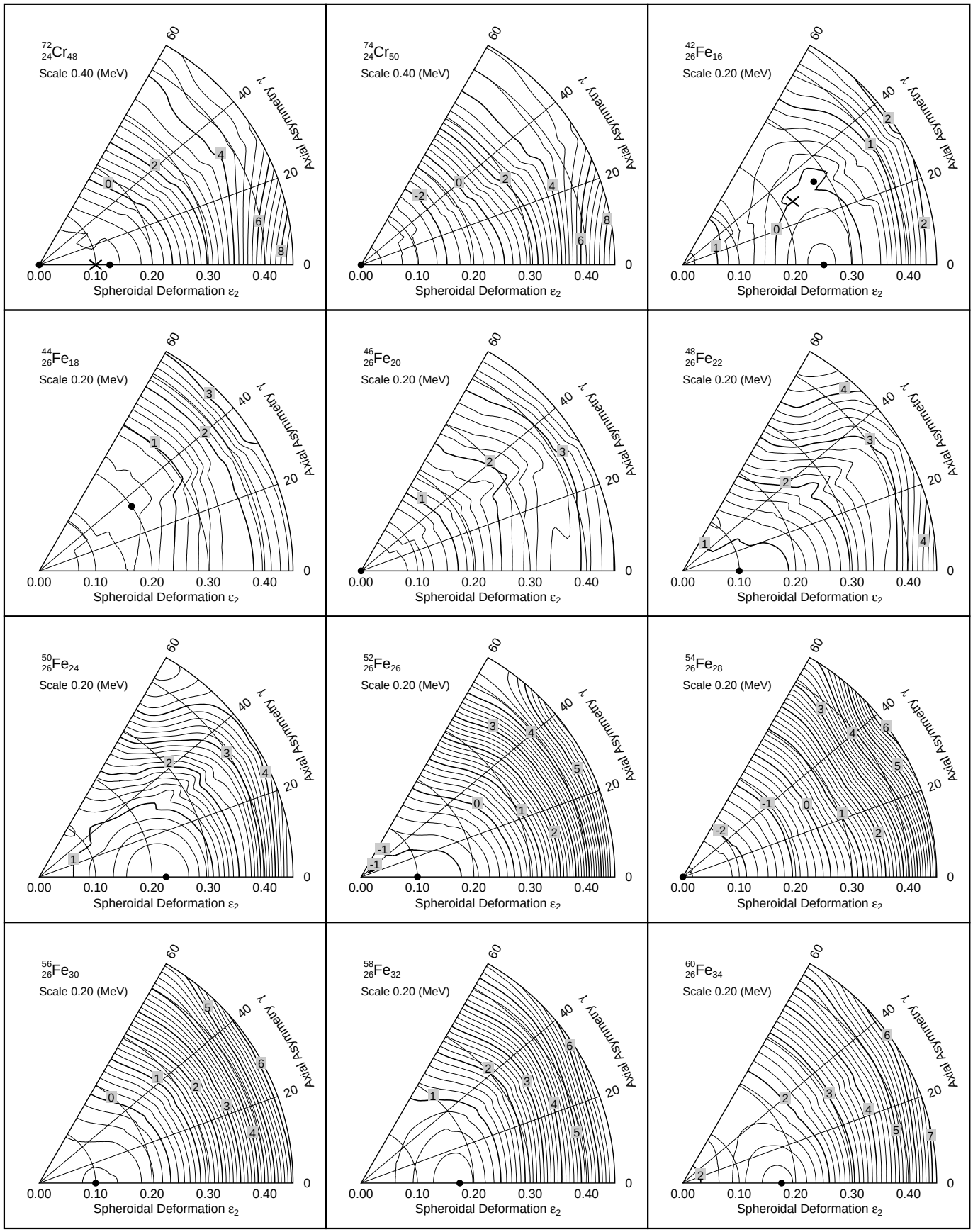
Graph 15


$^{58}_{22}Ti_{36}$
$^{60}_{22}Ti_{38}$
$^{62}_{22}Ti_{40}$
$^{64}_{22}Ti_{42}$
$^{66}_{22}Ti_{44}$
$^{68}_{22}Ti_{46}$
$^{70}_{22}Ti_{48}$
$^{38}_{24}Cr_{14}$
$^{40}_{24}Cr_{16}$
$^{42}_{24}Cr_{18}$
$^{44}_{24}Cr_{20}$
$^{46}_{24}Cr_{22}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

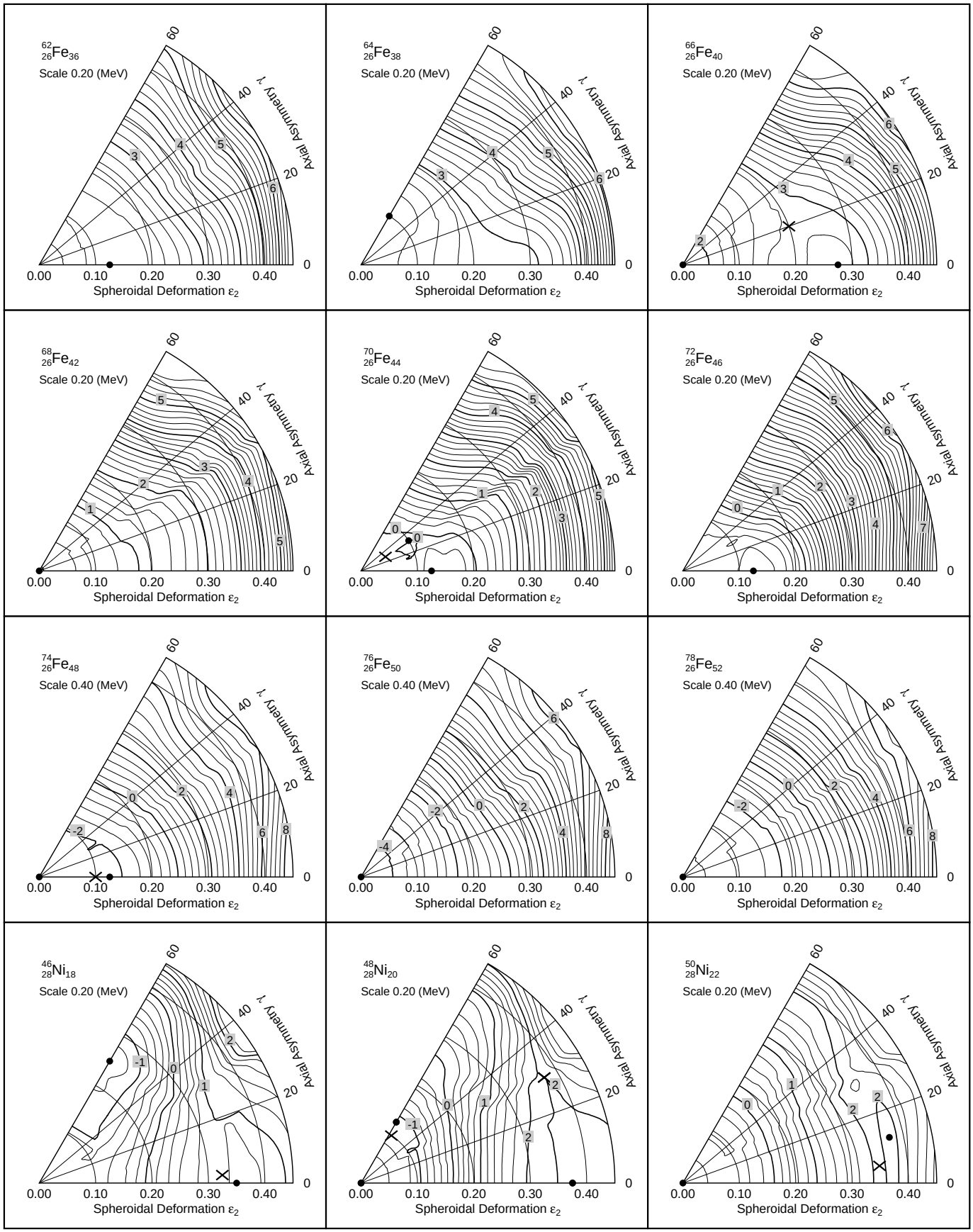
Graph 16


$^{48}_{24}Cr_{24}$
$^{50}_{24}Cr_{26}$
$^{52}_{24}Cr_{28}$
$^{54}_{24}Cr_{30}$
$^{56}_{24}Cr_{32}$
$^{58}_{24}Cr_{34}$
$^{60}_{24}Cr_{36}$
$^{62}_{24}Cr_{38}$
$^{64}_{24}Cr_{40}$
$^{66}_{24}Cr_{42}$
$^{68}_{24}Cr_{44}$
$^{70}_{24}Cr_{46}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

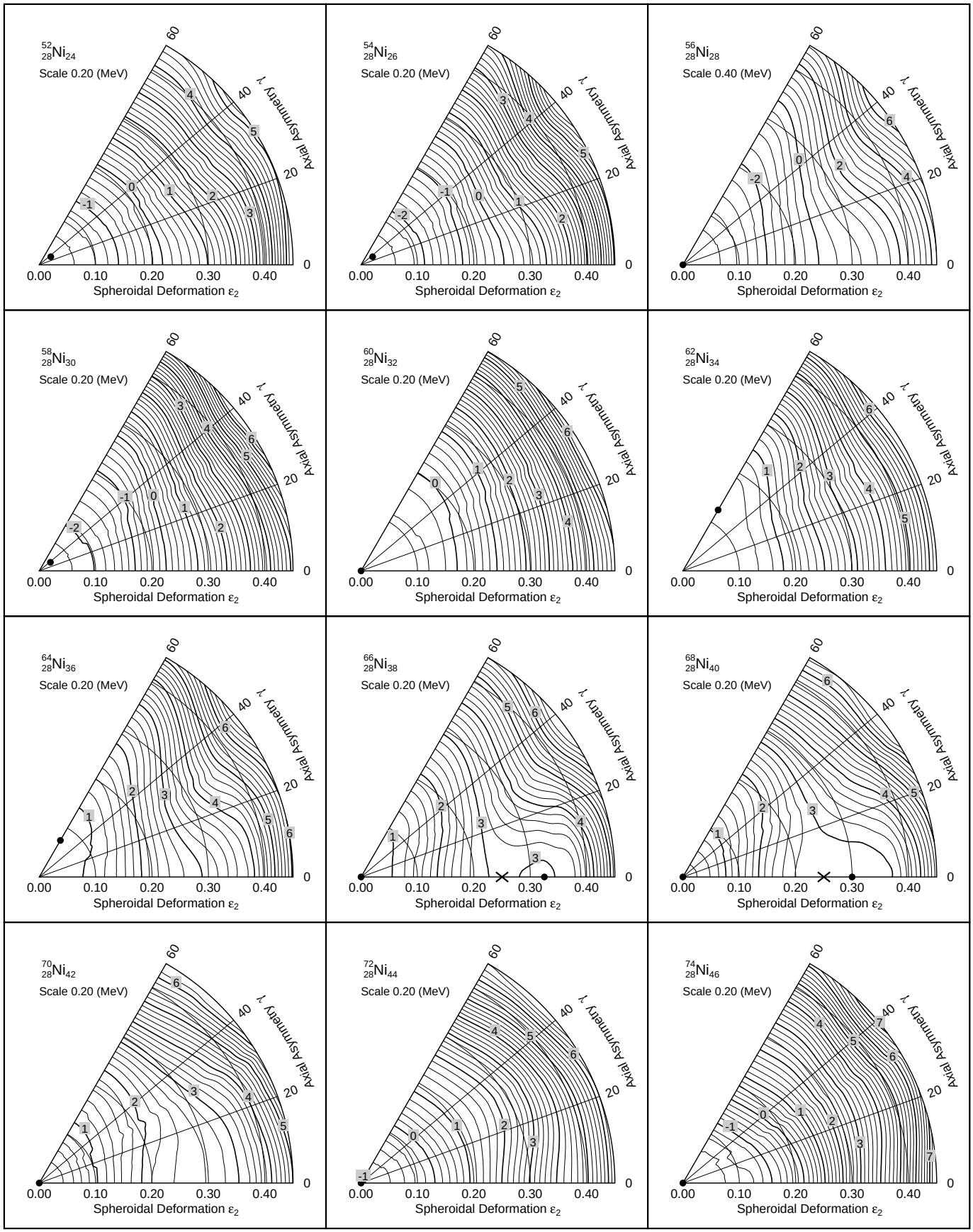
Graph 17


$^{72}_{24}Cr_{48}$
Scale 0.40 (MeV)
$^{74}_{24}Cr_{50}$
Scale 0.40 (MeV)
$^{42}_{26}Fe_{16}$
Scale 0.20 (MeV)
$^{44}_{26}Fe_{18}$
Scale 0.20 (MeV)
$^{46}_{26}Fe_{20}$
Scale 0.20 (MeV)
$^{48}_{26}Fe_{22}$
Scale 0.20 (MeV)
$^{50}_{26}Fe_{24}$
Scale 0.20 (MeV)
$^{52}_{26}Fe_{26}$
Scale 0.20 (MeV)
$^{54}_{26}Fe_{28}$
Scale 0.20 (MeV)
$^{56}_{26}Fe_{30}$
Scale 0.20 (MeV)
$^{58}_{26}Fe_{32}$
Scale 0.20 (MeV)
$^{60}_{26}Fe_{34}$
Scale 0.20 (MeV)
Axial Asymmetry γ
60
40
20
0
0.00 0.10 0.20 0.30 0.40
Spheroidal Deformation ε_2

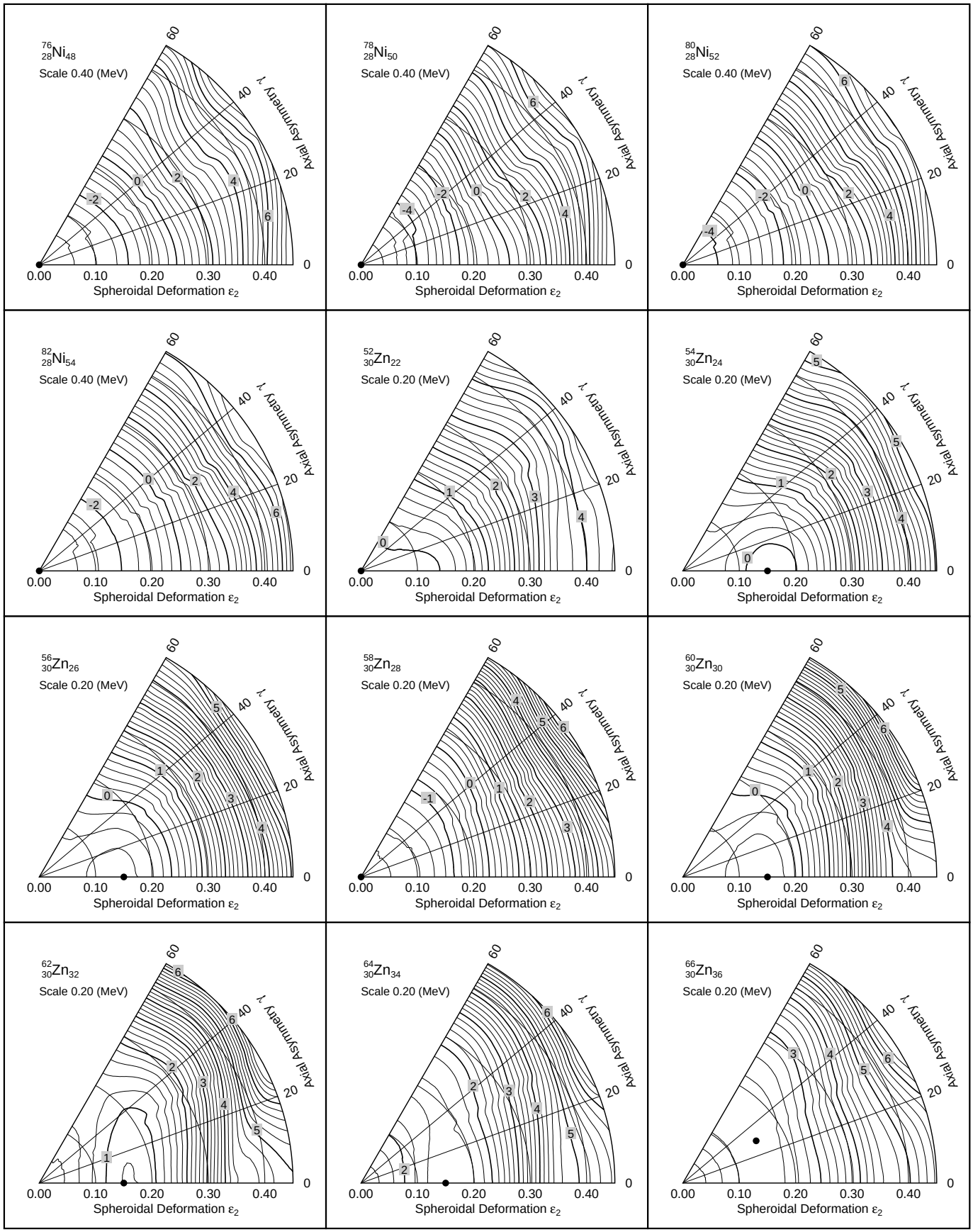
Graph 18


$^{62}_{26}Fe_{36}$
Scale 0.20 (MeV)
$^{64}_{26}Fe_{38}$
Scale 0.20 (MeV)
$^{66}_{26}Fe_{40}$
Scale 0.20 (MeV)
$^{68}_{26}Fe_{42}$
Scale 0.20 (MeV)
$^{70}_{26}Fe_{44}$
Scale 0.20 (MeV)
$^{72}_{26}Fe_{46}$
Scale 0.20 (MeV)
$^{74}_{26}Fe_{48}$
Scale 0.40 (MeV)
$^{76}_{26}Fe_{50}$
Scale 0.40 (MeV)
$^{78}_{26}Fe_{52}$
Scale 0.40 (MeV)
$^{46}_{28}Ni_{18}$
Scale 0.20 (MeV)
$^{48}_{28}Ni_{20}$
Scale 0.20 (MeV)
$^{50}_{28}Ni_{22}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

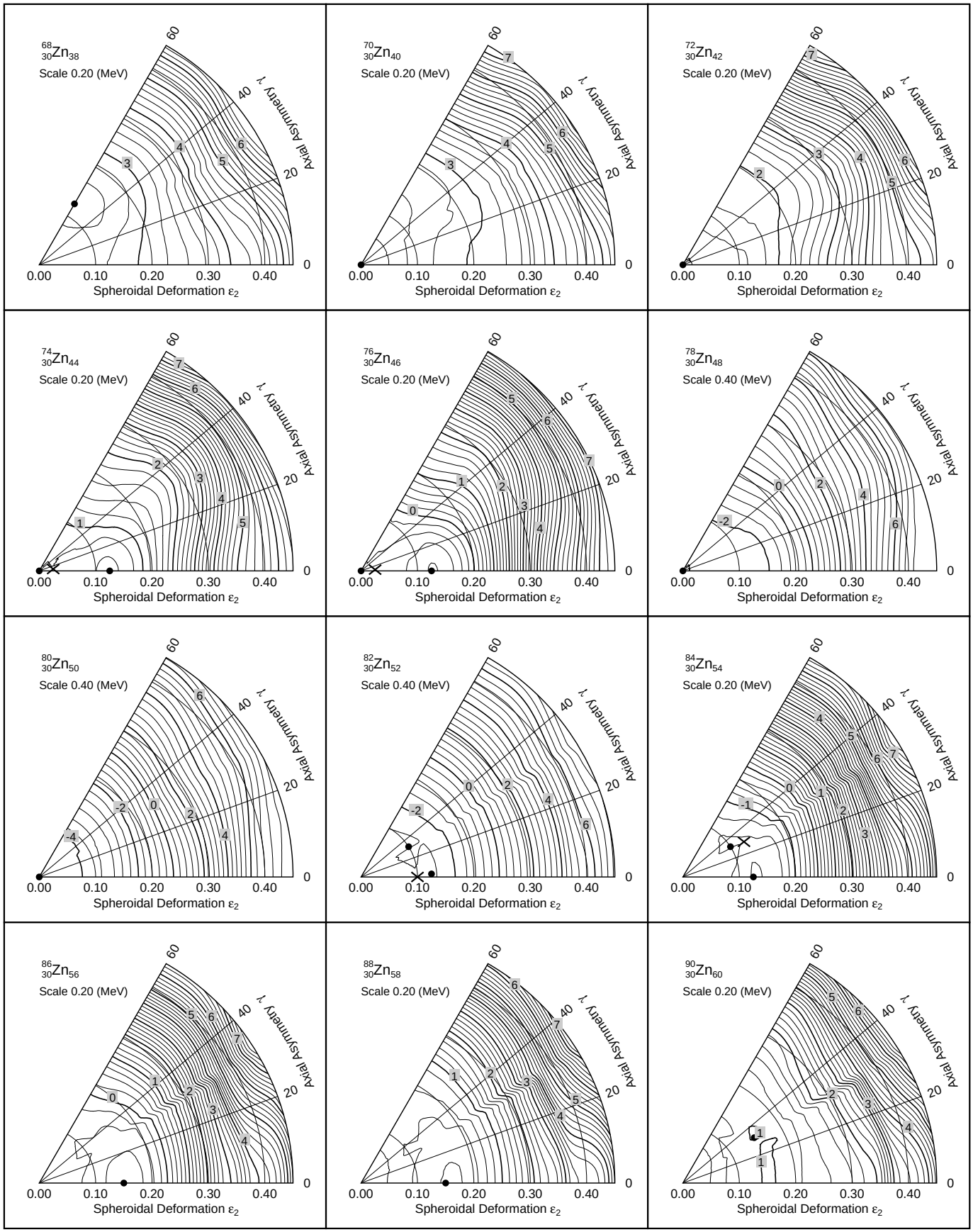
Graph 19


$^{52}_{28}Ni_{24}$ Scale 0.20 (MeV)
$^{54}_{28}Ni_{26}$ Scale 0.20 (MeV)
$^{56}_{28}Ni_{28}$ Scale 0.40 (MeV)
$^{58}_{28}Ni_{30}$ Scale 0.20 (MeV)
$^{60}_{28}Ni_{32}$ Scale 0.20 (MeV)
$^{62}_{28}Ni_{34}$ Scale 0.20 (MeV)
$^{64}_{28}Ni_{36}$ Scale 0.20 (MeV)
$^{66}_{28}Ni_{38}$ Scale 0.20 (MeV)
$^{68}_{28}Ni_{40}$ Scale 0.20 (MeV)
$^{70}_{28}Ni_{42}$ Scale 0.20 (MeV)
$^{72}_{28}Ni_{44}$ Scale 0.20 (MeV)
$^{74}_{28}Ni_{46}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

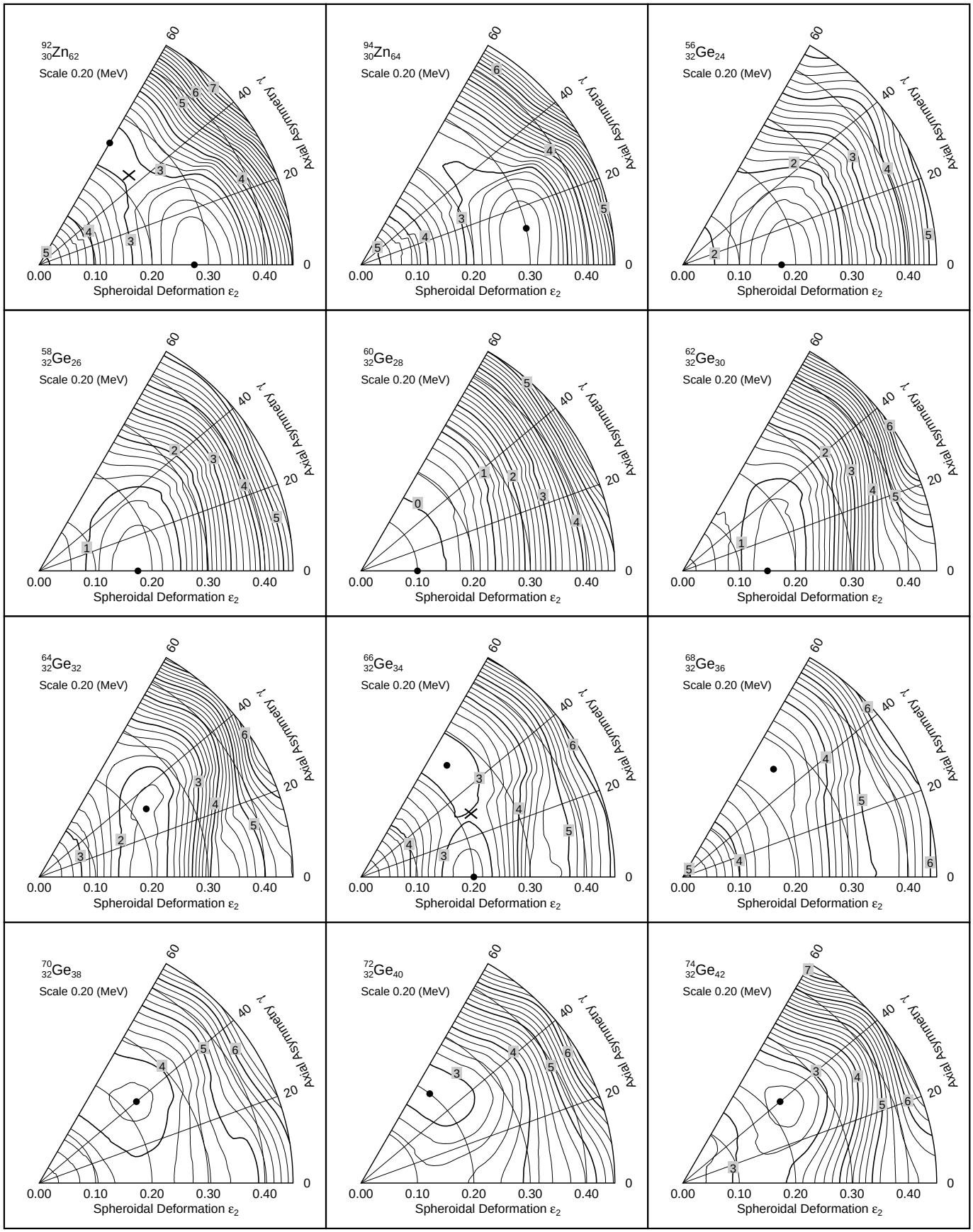
Graph 20


$^{76}_{28}Ni_{48}$
Scale 0.40 (MeV)
$^{78}_{28}Ni_{50}$
Scale 0.40 (MeV)
$^{80}_{28}Ni_{52}$
Scale 0.40 (MeV)
$^{82}_{28}Ni_{54}$
Scale 0.40 (MeV)
$^{52}_{30}Zn_{22}$
Scale 0.20 (MeV)
$^{54}_{30}Zn_{24}$
Scale 0.20 (MeV)
$^{56}_{30}Zn_{26}$
Scale 0.20 (MeV)
$^{58}_{30}Zn_{28}$
Scale 0.20 (MeV)
$^{60}_{30}Zn_{30}$
Scale 0.20 (MeV)
$^{62}_{30}Zn_{32}$
Scale 0.20 (MeV)
$^{64}_{30}Zn_{34}$
Scale 0.20 (MeV)
$^{66}_{30}Zn_{36}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

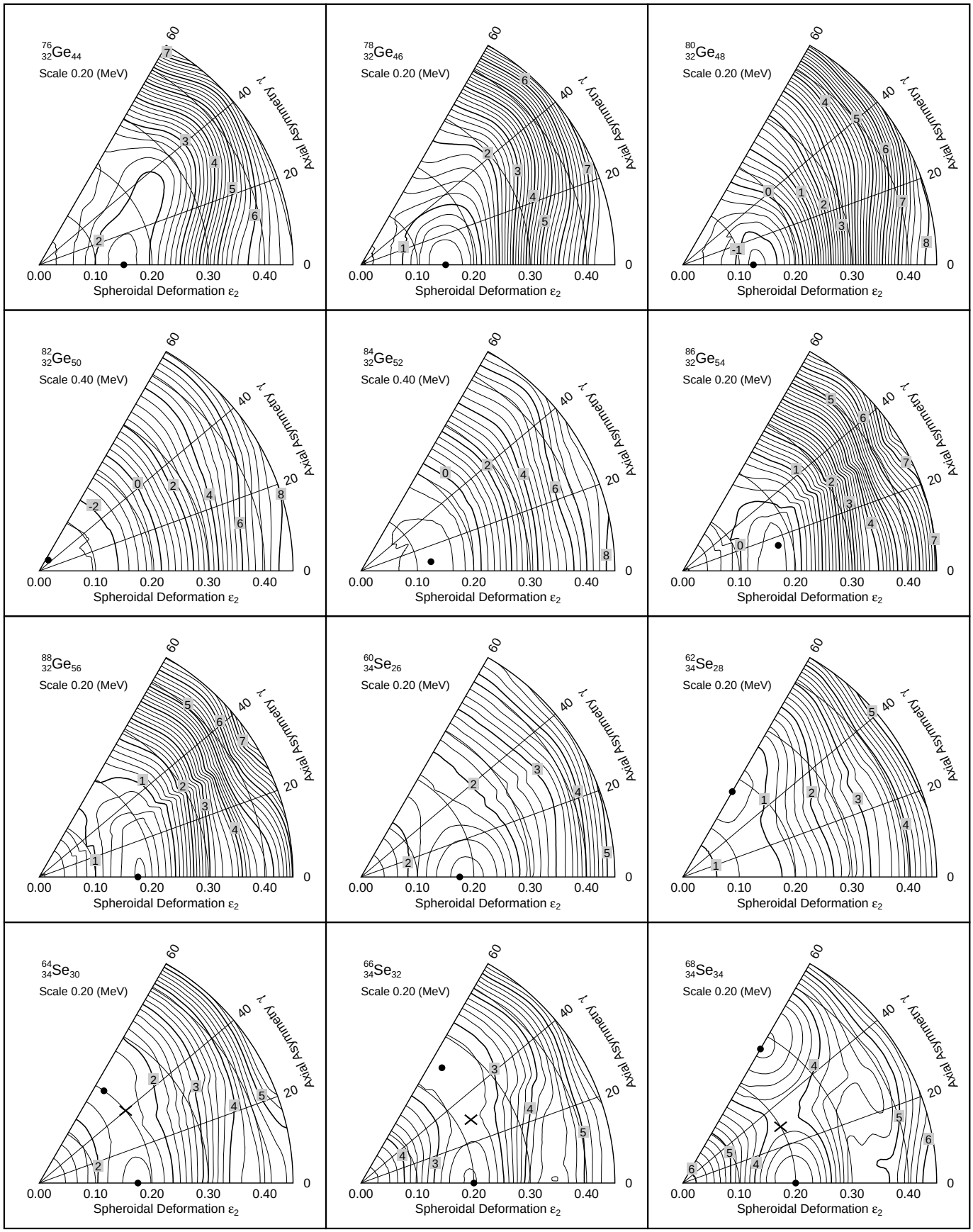
Graph 21


$^{68}_{30}Zn_{38}$ Scale 0.20 (MeV)
$^{70}_{30}Zn_{40}$ Scale 0.20 (MeV)
$^{72}_{30}Zn_{42}$ Scale 0.20 (MeV)
$^{74}_{30}Zn_{44}$ Scale 0.20 (MeV)
$^{76}_{30}Zn_{46}$ Scale 0.20 (MeV)
$^{78}_{30}Zn_{48}$ Scale 0.40 (MeV)
$^{80}_{30}Zn_{50}$ Scale 0.40 (MeV)
$^{82}_{30}Zn_{52}$ Scale 0.40 (MeV)
$^{84}_{30}Zn_{54}$ Scale 0.20 (MeV)
$^{86}_{30}Zn_{56}$ Scale 0.20 (MeV)
$^{88}_{30}Zn_{58}$ Scale 0.20 (MeV)
$^{90}_{30}Zn_{60}$ Scale 0.20 (MeV)
Axial Asymmetry γ
60
40
20
0
0.00 0.10 0.20 0.30 0.40
Spheroidal Deformation ε_2

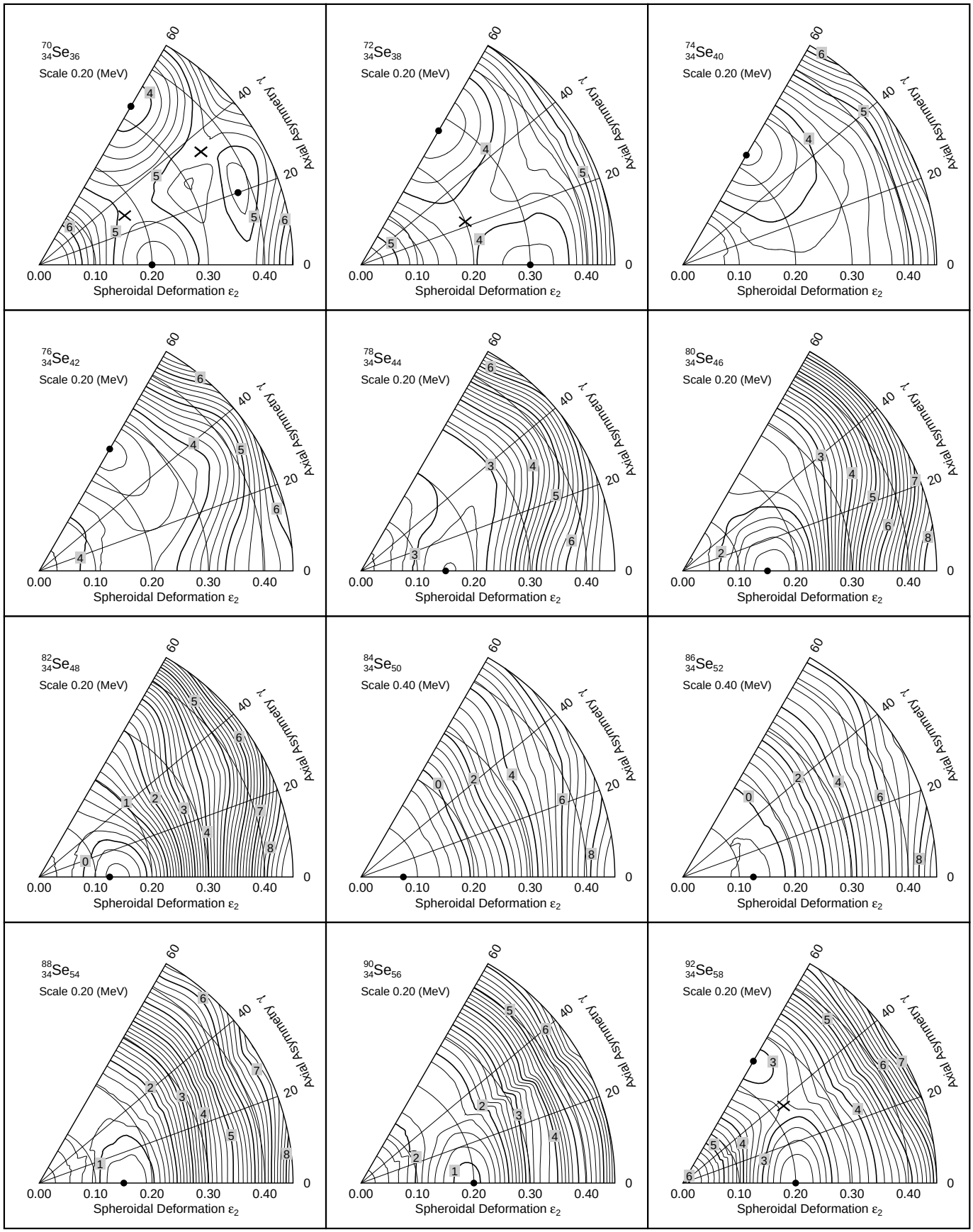
Graph 22


$^{92}_{30}Zn_{62}$
$^{94}_{30}Zn_{64}$
$^{56}_{32}Ge_{24}$
$^{58}_{32}Ge_{26}$
$^{60}_{32}Ge_{28}$
$^{62}_{32}Ge_{30}$
$^{64}_{32}Ge_{32}$
$^{66}_{32}Ge_{34}$
$^{68}_{32}Ge_{36}$
$^{70}_{32}Ge_{38}$
$^{72}_{32}Ge_{40}$
$^{74}_{32}Ge_{42}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

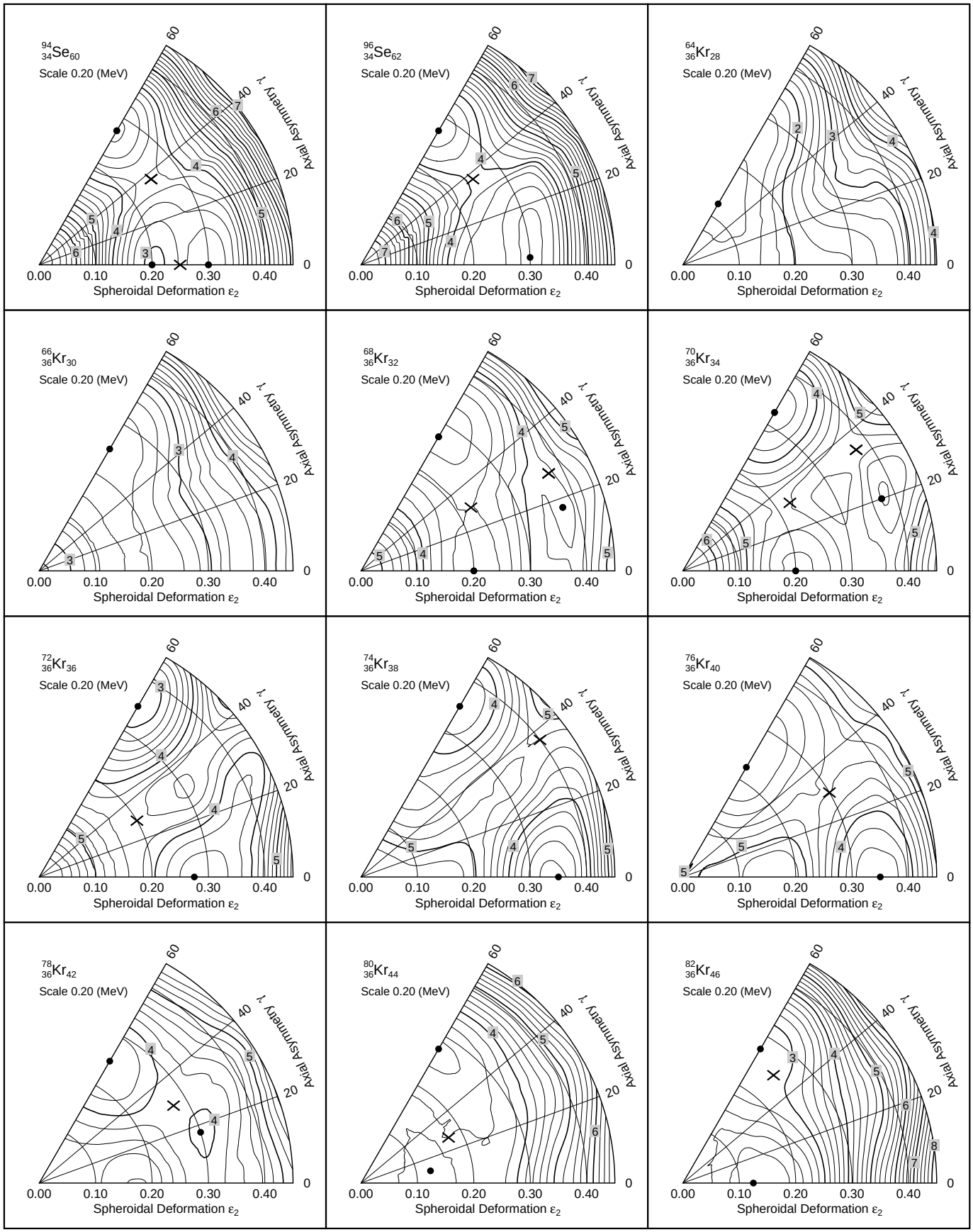
Graph 23


$^{76}_{32}Ge_{44}$ Scale 0.20 (MeV)
$^{78}_{32}Ge_{46}$ Scale 0.20 (MeV)
$^{80}_{32}Ge_{48}$ Scale 0.20 (MeV)
$^{82}_{32}Ge_{50}$ Scale 0.40 (MeV)
$^{84}_{32}Ge_{52}$ Scale 0.40 (MeV)
$^{86}_{32}Ge_{54}$ Scale 0.20 (MeV)
$^{88}_{32}Ge_{56}$ Scale 0.20 (MeV)
$^{60}_{34}Se_{26}$ Scale 0.20 (MeV)
$^{62}_{34}Se_{28}$ Scale 0.20 (MeV)
$^{64}_{34}Se_{30}$ Scale 0.20 (MeV)
$^{66}_{34}Se_{32}$ Scale 0.20 (MeV)
$^{68}_{34}Se_{34}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

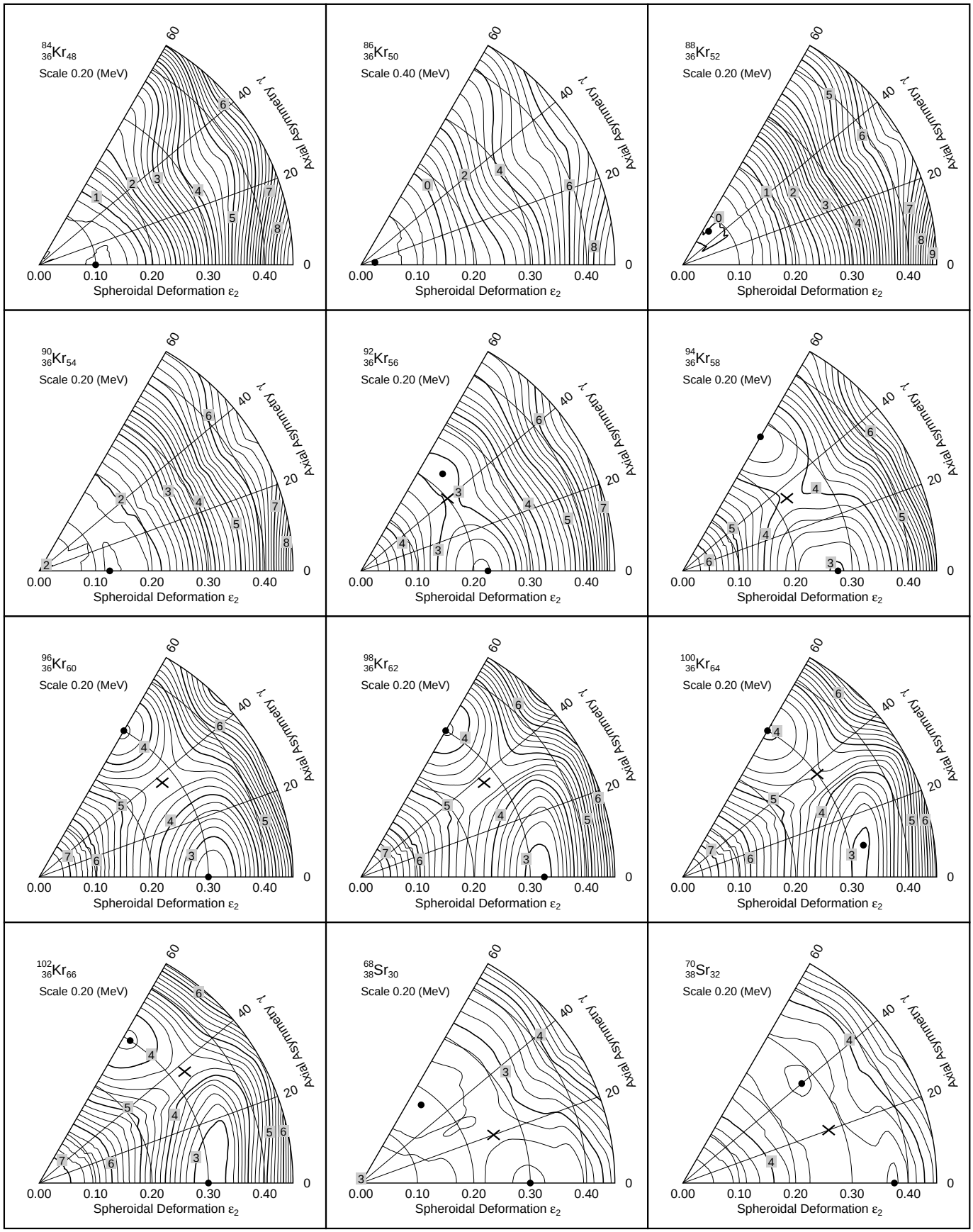
Graph 24


$^{70}_{34}Se_{36}$ Scale 0.20 (MeV)
$^{72}_{34}Se_{38}$ Scale 0.20 (MeV)
$^{74}_{34}Se_{40}$ Scale 0.20 (MeV)
$^{76}_{34}Se_{42}$ Scale 0.20 (MeV)
$^{78}_{34}Se_{44}$ Scale 0.20 (MeV)
$^{80}_{34}Se_{46}$ Scale 0.20 (MeV)
$^{82}_{34}Se_{48}$ Scale 0.20 (MeV)
$^{84}_{34}Se_{50}$ Scale 0.40 (MeV)
$^{86}_{34}Se_{52}$ Scale 0.40 (MeV)
$^{88}_{34}Se_{54}$ Scale 0.20 (MeV)
$^{90}_{34}Se_{56}$ Scale 0.20 (MeV)
$^{92}_{34}Se_{58}$ Scale 0.20 (MeV)
Axial Asymmetry γ
60
40
20
0
0.00 0.10 0.20 0.30 0.40
Spheroidal Deformation ε_2

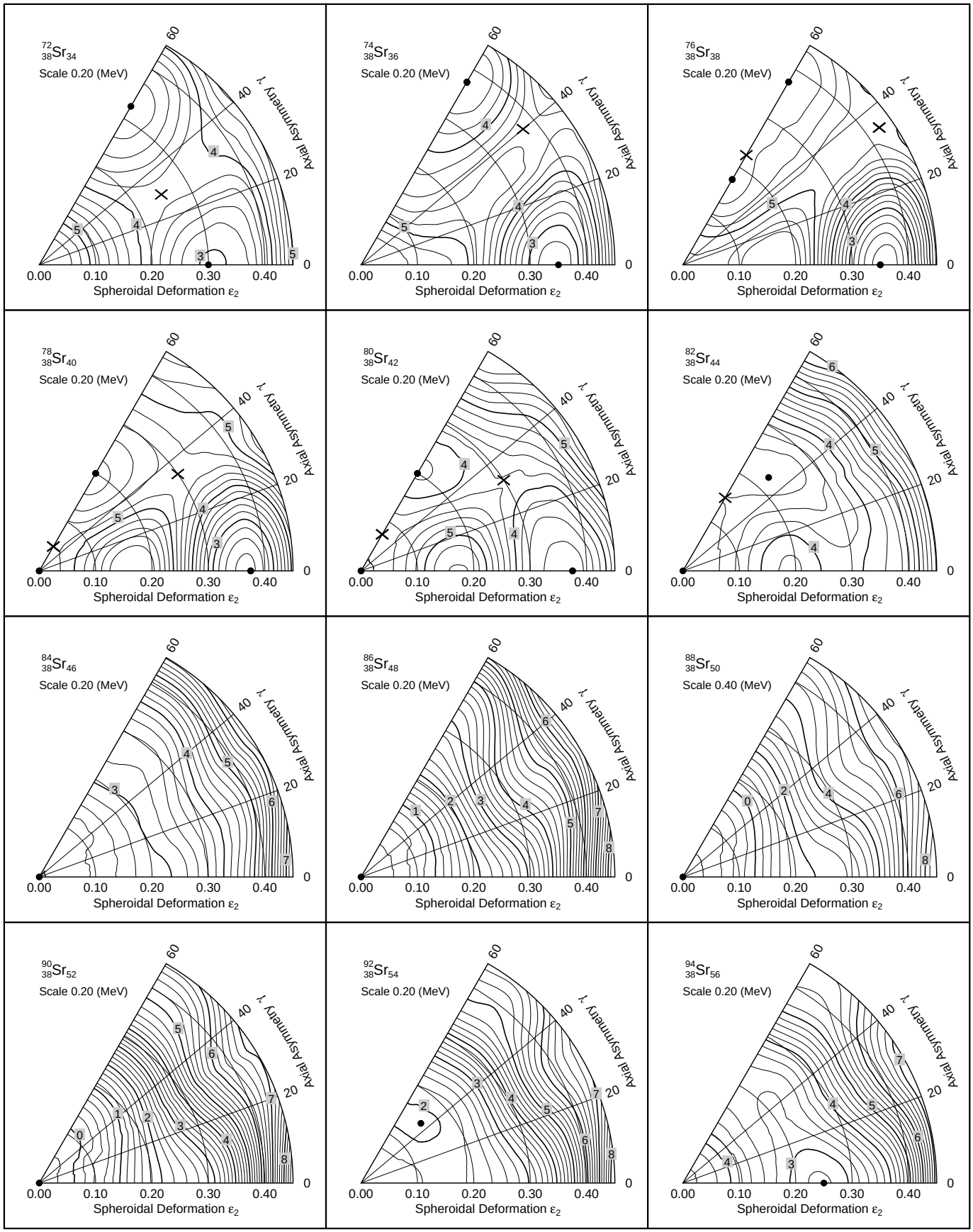
Graph 25


$^{94}_{34}Se_{60}$
$^{96}_{34}Se_{62}$
$^{64}_{36}Kr_{28}$
$^{66}_{36}Kr_{30}$
$^{68}_{36}Kr_{32}$
$^{70}_{36}Kr_{34}$
$^{72}_{36}Kr_{36}$
$^{74}_{36}Kr_{38}$
$^{76}_{36}Kr_{40}$
$^{78}_{36}Kr_{42}$
$^{80}_{36}Kr_{44}$
$^{82}_{36}Kr_{46}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

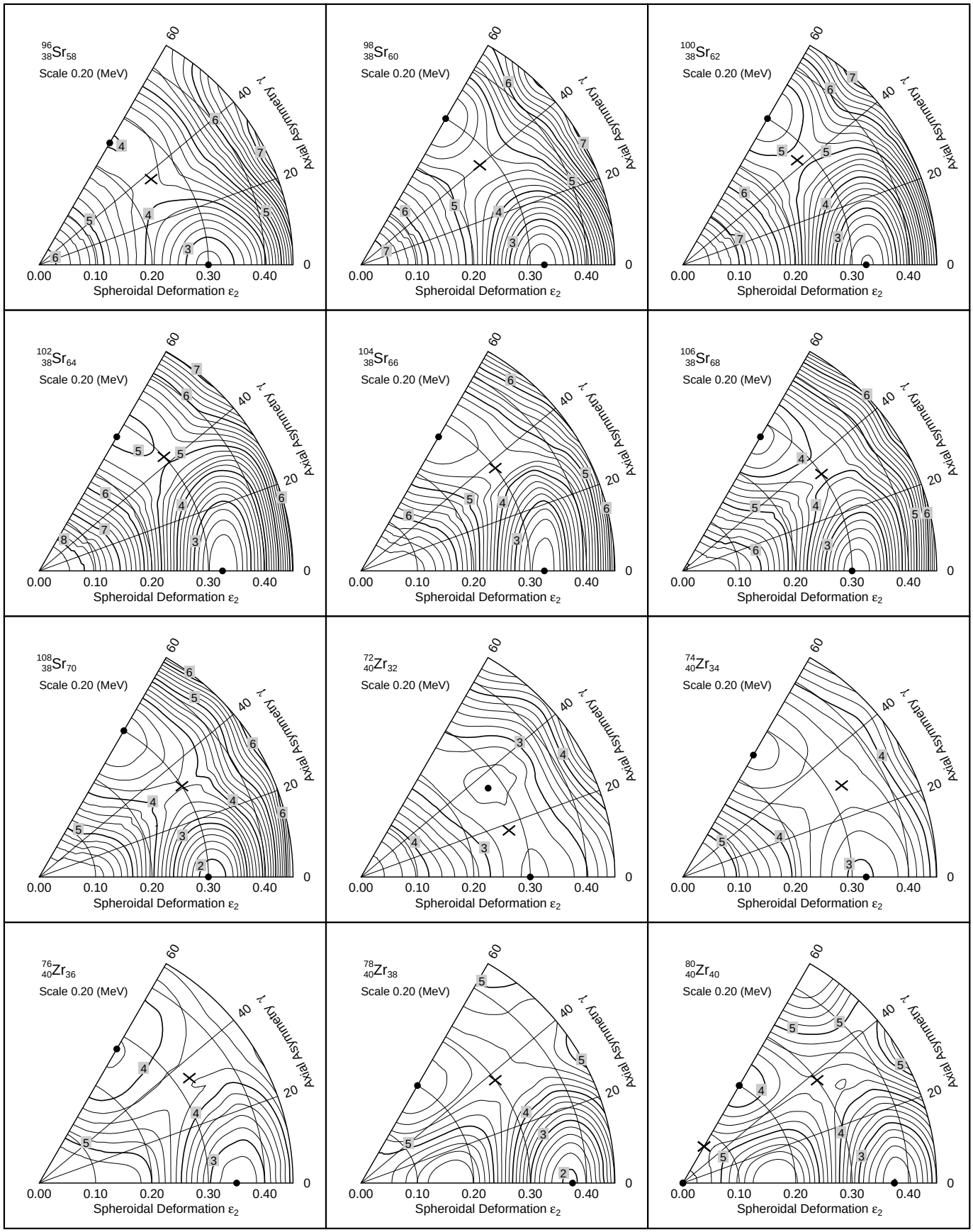
Graph 26


$^{84}_{36}Kr_{48}$
Scale 0.20 (MeV)
$^{86}_{36}Kr_{50}$
Scale 0.40 (MeV)
$^{88}_{36}Kr_{52}$
Scale 0.20 (MeV)
$^{90}_{36}Kr_{54}$
Scale 0.20 (MeV)
$^{92}_{36}Kr_{56}$
Scale 0.20 (MeV)
$^{94}_{36}Kr_{58}$
Scale 0.20 (MeV)
$^{96}_{36}Kr_{60}$
Scale 0.20 (MeV)
$^{98}_{36}Kr_{62}$
Scale 0.20 (MeV)
$^{100}_{36}Kr_{64}$
Scale 0.20 (MeV)
$^{102}_{36}Kr_{66}$
Scale 0.20 (MeV)
$^{68}_{38}Sr_{30}$
Scale 0.20 (MeV)
$^{70}_{38}Sr_{32}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

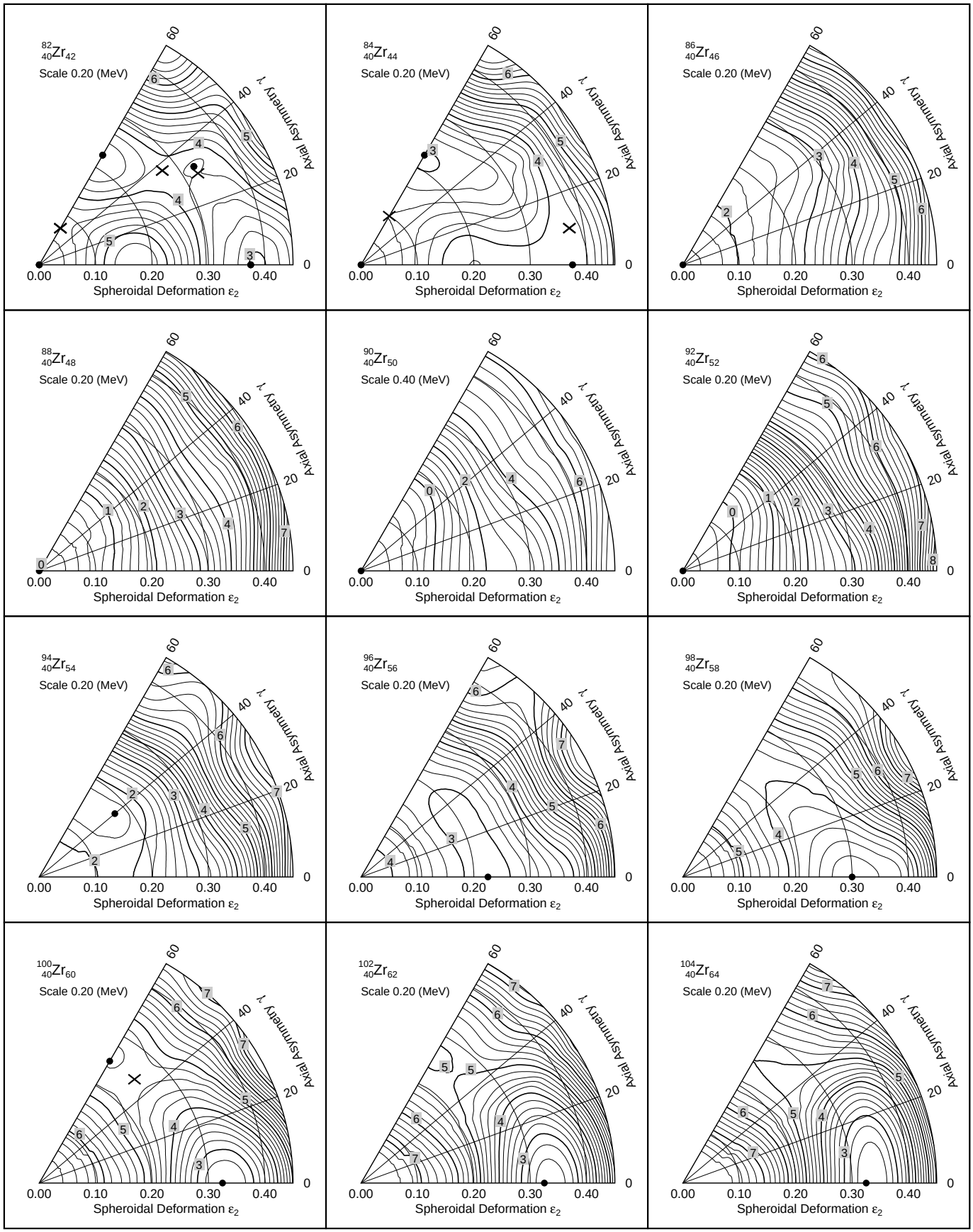
Graph 27


$^{72}_{38}Sr_{34}$ Scale 0.20 (MeV)
$^{74}_{38}Sr_{36}$ Scale 0.20 (MeV)
$^{76}_{38}Sr_{38}$ Scale 0.20 (MeV)
$^{78}_{38}Sr_{40}$ Scale 0.20 (MeV)
$^{80}_{38}Sr_{42}$ Scale 0.20 (MeV)
$^{82}_{38}Sr_{44}$ Scale 0.20 (MeV)
$^{84}_{38}Sr_{46}$ Scale 0.20 (MeV)
$^{86}_{38}Sr_{48}$ Scale 0.20 (MeV)
$^{88}_{38}Sr_{50}$ Scale 0.40 (MeV)
$^{90}_{38}Sr_{52}$ Scale 0.20 (MeV)
$^{92}_{38}Sr_{54}$ Scale 0.20 (MeV)
$^{94}_{38}Sr_{56}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

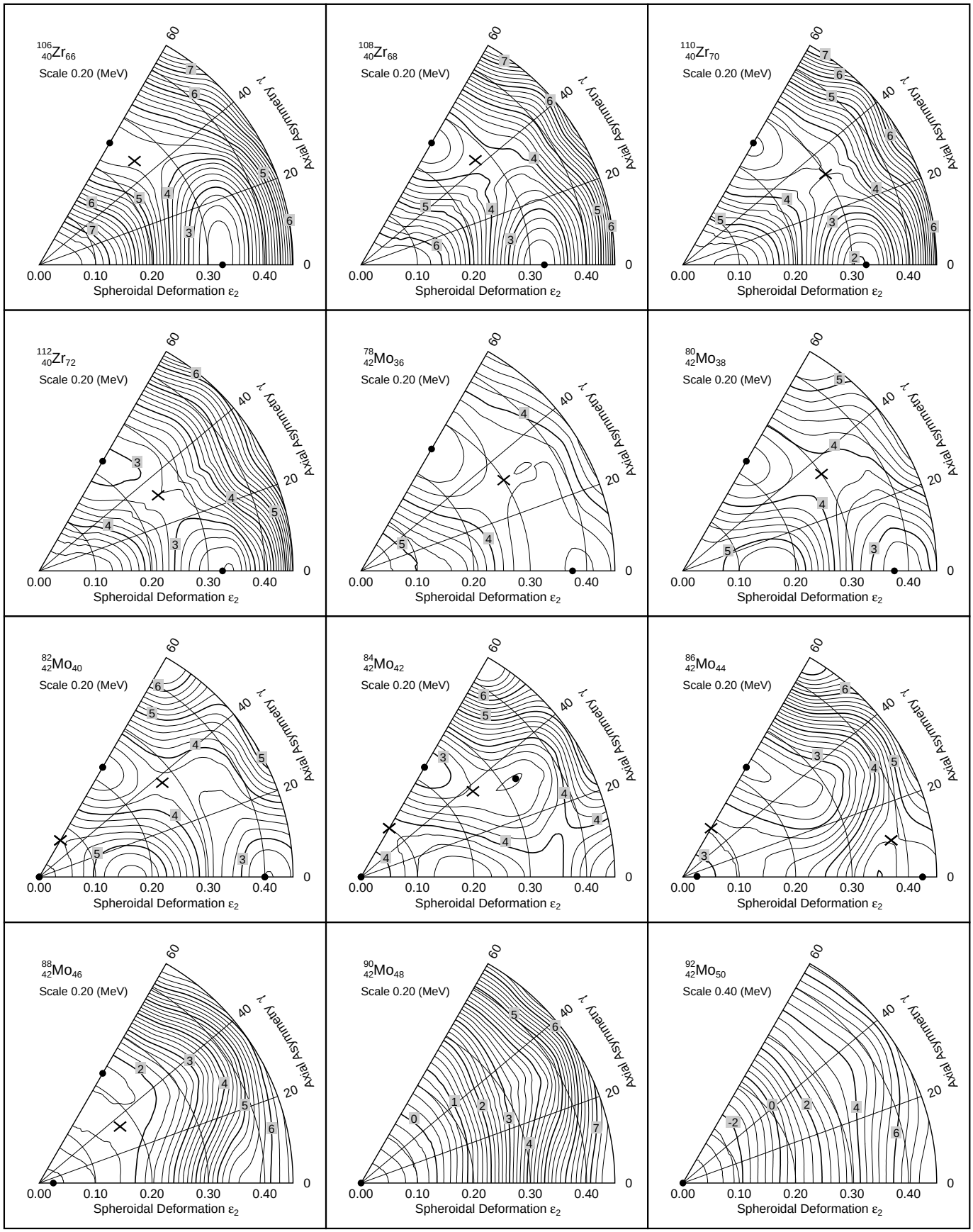
Graph 28


$^{96}_{38}Sr_{58}$
$^{98}_{38}Sr_{60}$
$^{100}_{38}Sr_{62}$
$^{102}_{38}Sr_{64}$
$^{104}_{38}Sr_{66}$
$^{106}_{38}Sr_{68}$
$^{108}_{38}Sr_{70}$
$^{72}_{40}Zr_{32}$
$^{74}_{40}Zr_{34}$
$^{76}_{40}Zr_{36}$
$^{78}_{40}Zr_{38}$
$^{80}_{40}Zr_{40}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

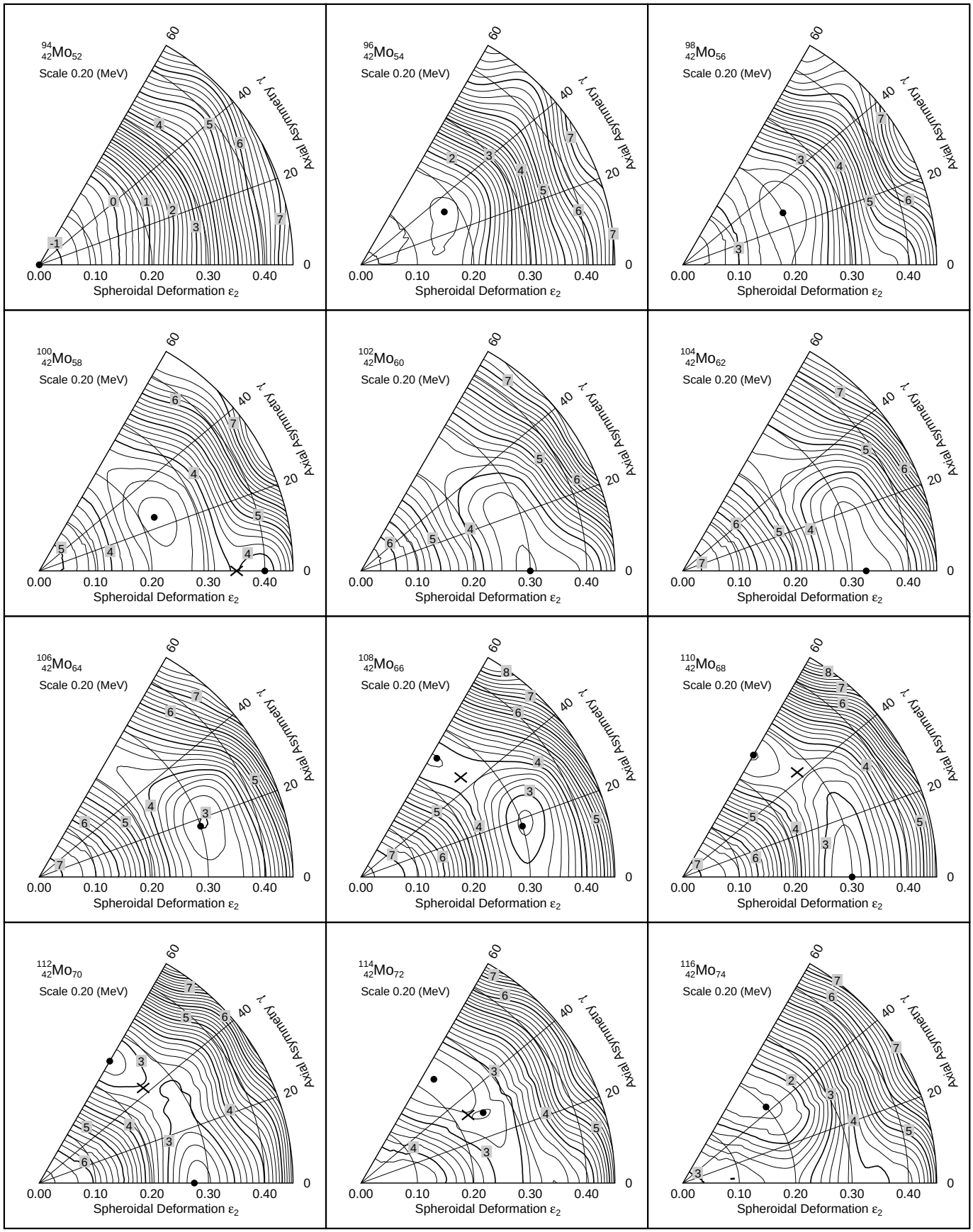
Graph 29


$^{82}_{40}Zr_{42}$ Scale 0.20 (MeV)
$^{84}_{40}Zr_{44}$ Scale 0.20 (MeV)
$^{86}_{40}Zr_{46}$ Scale 0.20 (MeV)
$^{88}_{40}Zr_{48}$ Scale 0.20 (MeV)
$^{90}_{40}Zr_{50}$ Scale 0.40 (MeV)
$^{92}_{40}Zr_{52}$ Scale 0.20 (MeV)
$^{94}_{40}Zr_{54}$ Scale 0.20 (MeV)
$^{96}_{40}Zr_{56}$ Scale 0.20 (MeV)
$^{98}_{40}Zr_{58}$ Scale 0.20 (MeV)
$^{100}_{40}Zr_{60}$ Scale 0.20 (MeV)
$^{102}_{40}Zr_{62}$ Scale 0.20 (MeV)
$^{104}_{40}Zr_{64}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

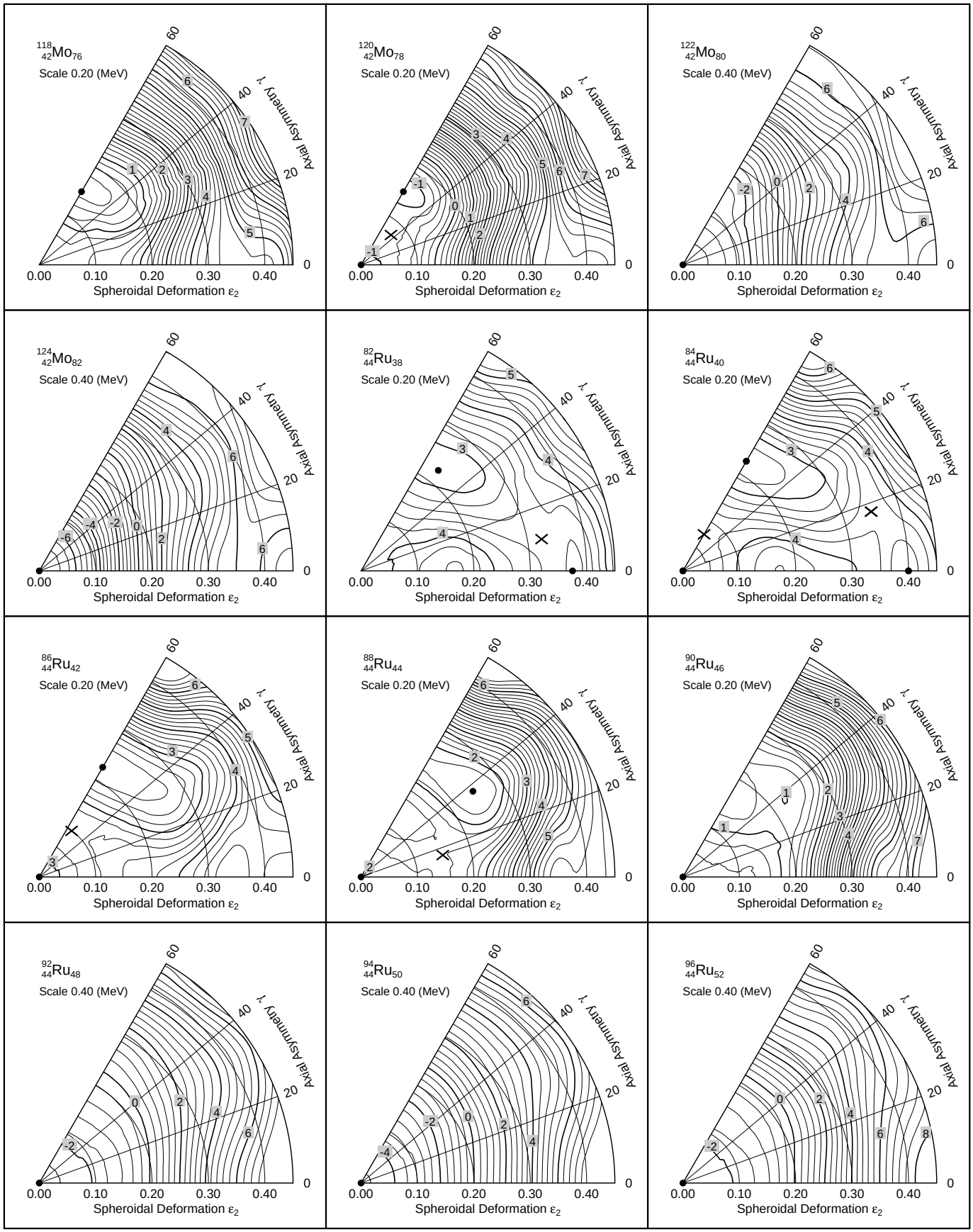
Graph 30


$^{106}_{40}Zr_{66}$
Scale 0.20 (MeV)
$^{108}_{40}Zr_{68}$
Scale 0.20 (MeV)
$^{110}_{40}Zr_{70}$
Scale 0.20 (MeV)
$^{112}_{40}Zr_{72}$
Scale 0.20 (MeV)
$^{78}_{42}Mo_{36}$
Scale 0.20 (MeV)
$^{80}_{42}Mo_{38}$
Scale 0.20 (MeV)
$^{82}_{42}Mo_{40}$
Scale 0.20 (MeV)
$^{84}_{42}Mo_{42}$
Scale 0.20 (MeV)
$^{86}_{42}Mo_{44}$
Scale 0.20 (MeV)
$^{88}_{42}Mo_{46}$
Scale 0.20 (MeV)
$^{90}_{42}Mo_{48}$
Scale 0.20 (MeV)
$^{92}_{42}Mo_{50}$
Scale 0.40 (MeV)
Axial Asymmetry γ
60
40
20
0
0.00 0.10 0.20 0.30 0.40
Spheroidal Deformation ε_2

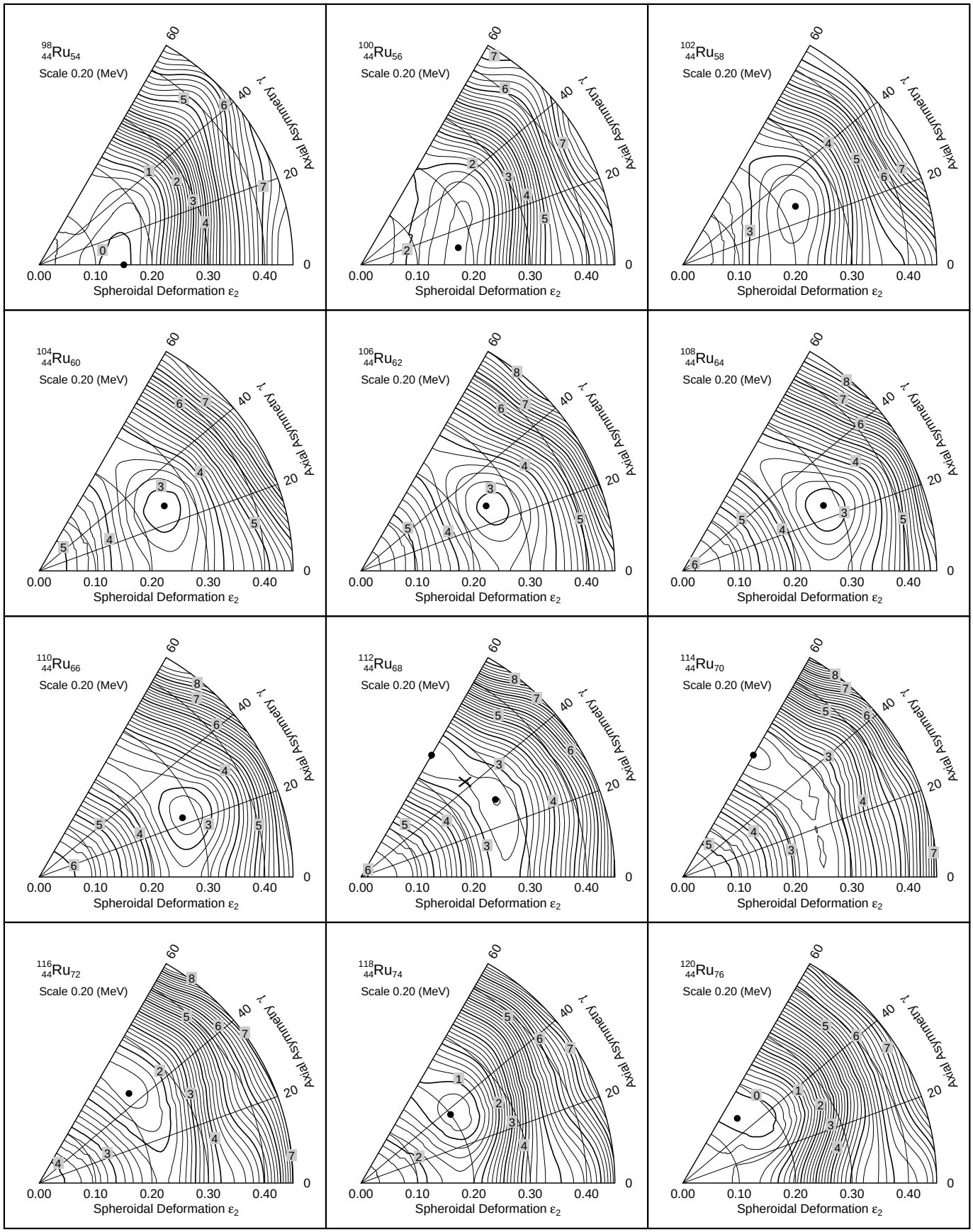
Graph 31


$^{94}_{42}Mo_{52}$
$^{96}_{42}Mo_{54}$
$^{98}_{42}Mo_{56}$
$^{100}_{42}Mo_{58}$
$^{102}_{42}Mo_{60}$
$^{104}_{42}Mo_{62}$
$^{106}_{42}Mo_{64}$
$^{108}_{42}Mo_{66}$
$^{110}_{42}Mo_{68}$
$^{112}_{42}Mo_{70}$
$^{114}_{42}Mo_{72}$
$^{116}_{42}Mo_{74}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

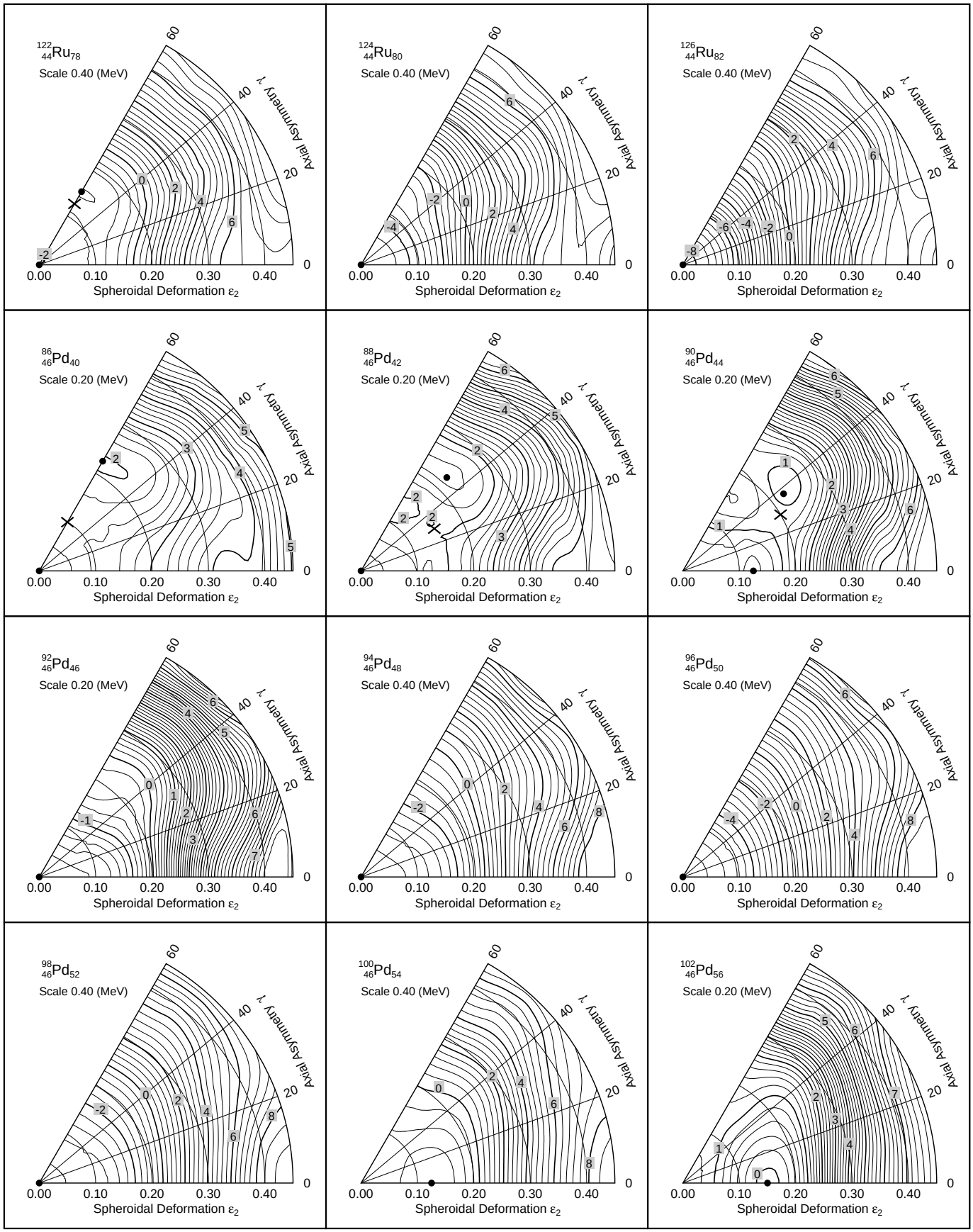
Graph 32


$^{118}_{42}Mo_{76}$
Scale 0.20 (MeV)
$^{120}_{42}Mo_{78}$
Scale 0.20 (MeV)
$^{122}_{42}Mo_{80}$
Scale 0.40 (MeV)
$^{124}_{42}Mo_{82}$
Scale 0.40 (MeV)
$^{82}_{44}Ru_{38}$
Scale 0.20 (MeV)
$^{84}_{44}Ru_{40}$
Scale 0.20 (MeV)
$^{86}_{44}Ru_{42}$
Scale 0.20 (MeV)
$^{88}_{44}Ru_{44}$
Scale 0.20 (MeV)
$^{90}_{44}Ru_{46}$
Scale 0.20 (MeV)
$^{92}_{44}Ru_{48}$
Scale 0.40 (MeV)
$^{94}_{44}Ru_{50}$
Scale 0.40 (MeV)
$^{96}_{44}Ru_{52}$
Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

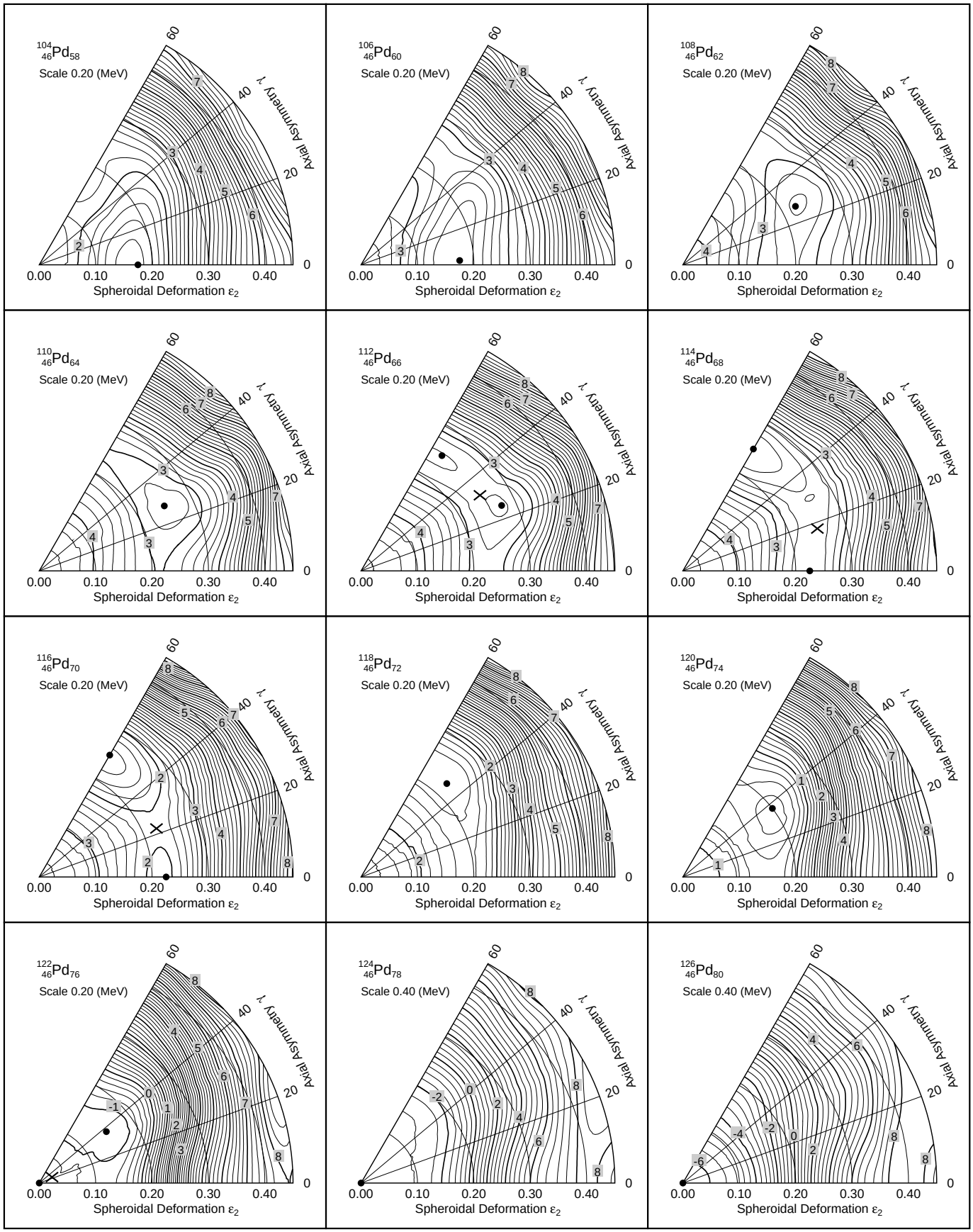
Graph 33


$^{98}_{44}Ru_{54}$
$^{100}_{44}Ru_{56}$
$^{102}_{44}Ru_{58}$
$^{104}_{44}Ru_{60}$
$^{106}_{44}Ru_{62}$
$^{108}_{44}Ru_{64}$
$^{110}_{44}Ru_{66}$
$^{112}_{44}Ru_{68}$
$^{114}_{44}Ru_{70}$
$^{116}_{44}Ru_{72}$
$^{118}_{44}Ru_{74}$
$^{120}_{44}Ru_{76}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

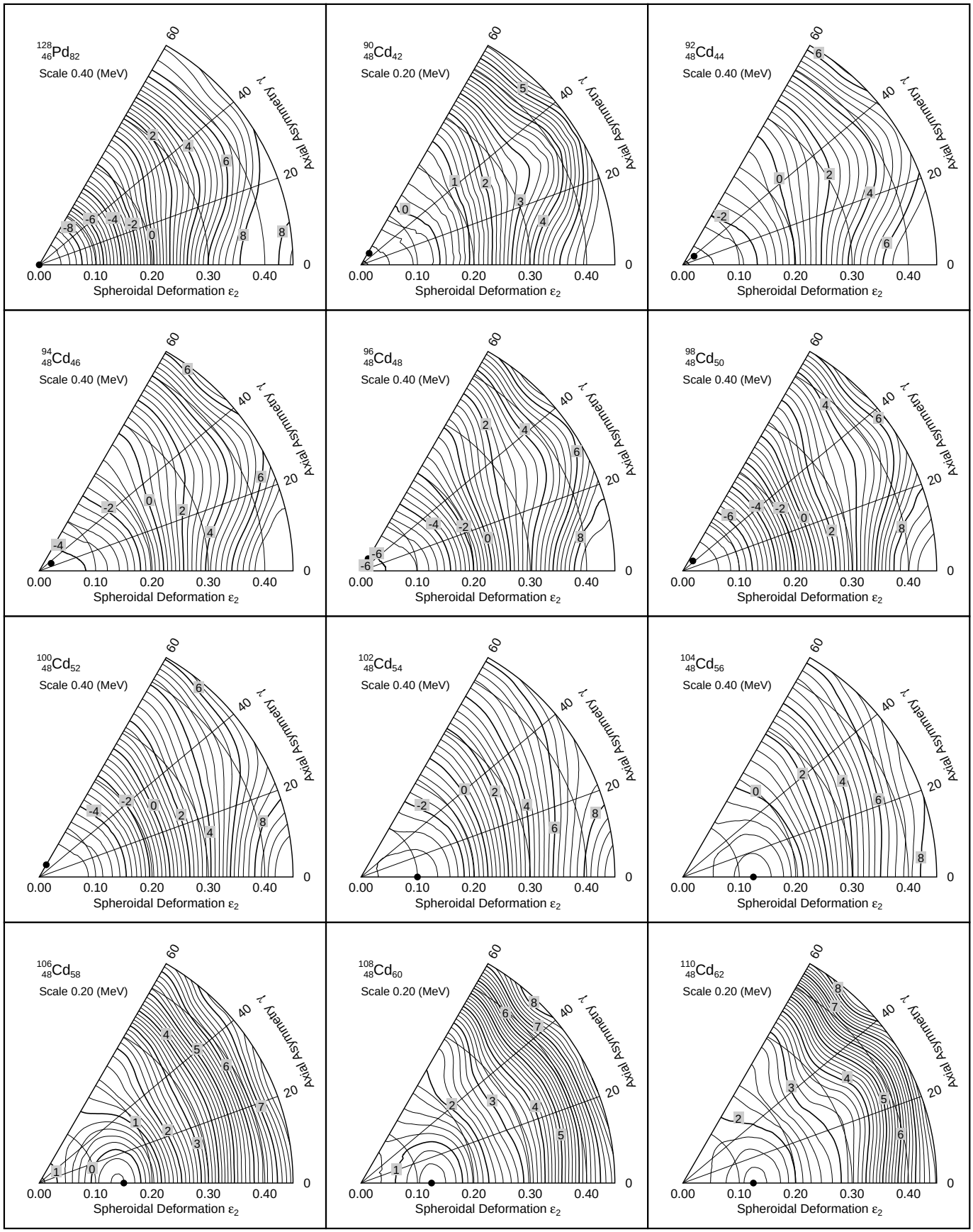
Graph 34


$^{122}_{44}Ru_{78}$
Scale 0.40 (MeV)
$^{124}_{44}Ru_{80}$
Scale 0.40 (MeV)
$^{126}_{44}Ru_{82}$
Scale 0.40 (MeV)
$^{86}_{46}Pd_{40}$
Scale 0.20 (MeV)
$^{88}_{46}Pd_{42}$
Scale 0.20 (MeV)
$^{90}_{46}Pd_{44}$
Scale 0.20 (MeV)
$^{92}_{46}Pd_{46}$
Scale 0.20 (MeV)
$^{94}_{46}Pd_{48}$
Scale 0.40 (MeV)
$^{96}_{46}Pd_{50}$
Scale 0.40 (MeV)
$^{98}_{46}Pd_{52}$
Scale 0.40 (MeV)
$^{100}_{46}Pd_{54}$
Scale 0.40 (MeV)
$^{102}_{46}Pd_{56}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

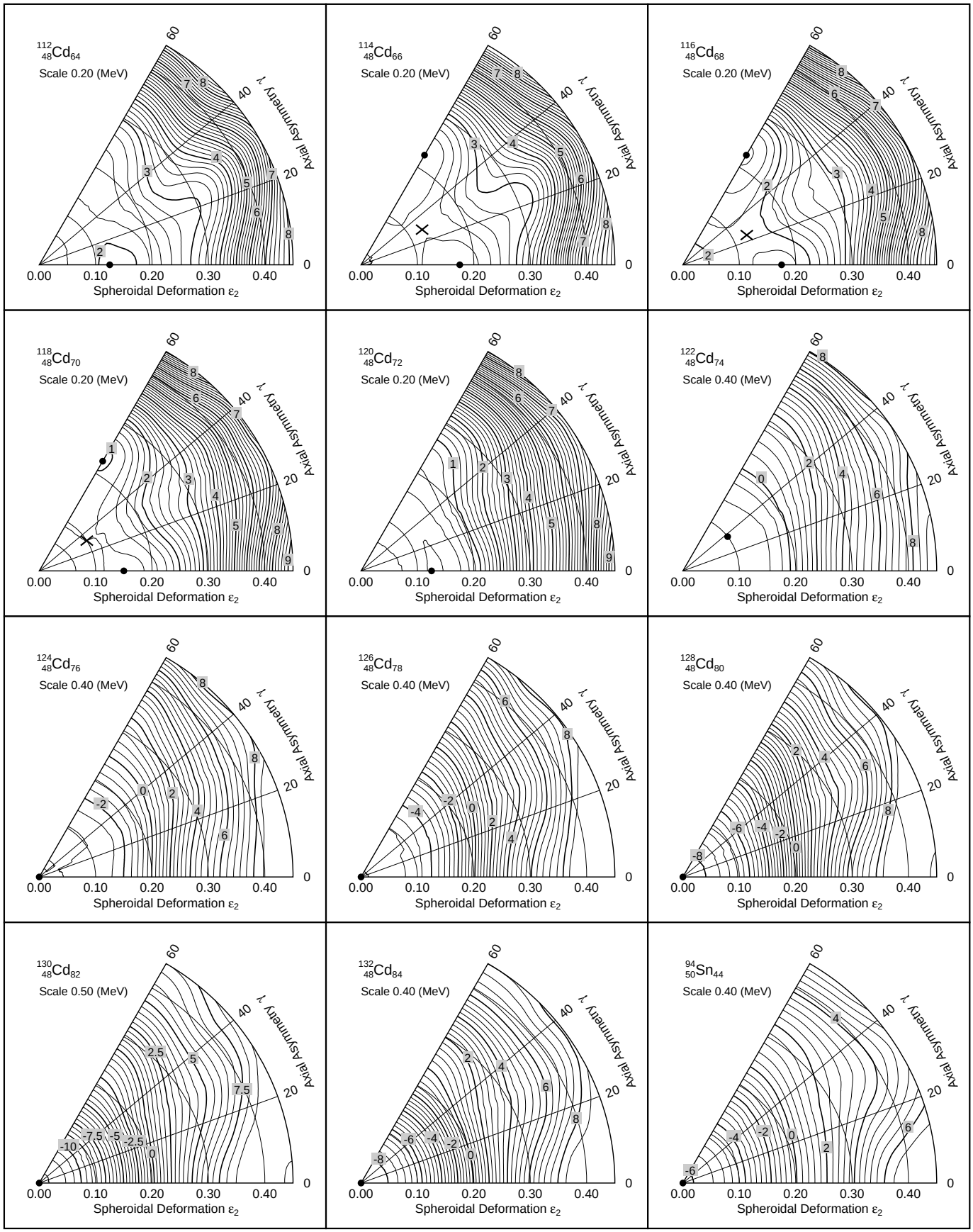
Graph 35


$^{104}_{46}Pd_{58}$
Scale 0.20 (MeV)
$^{106}_{46}Pd_{60}$
Scale 0.20 (MeV)
$^{108}_{46}Pd_{62}$
Scale 0.20 (MeV)
$^{110}_{46}Pd_{64}$
Scale 0.20 (MeV)
$^{112}_{46}Pd_{66}$
Scale 0.20 (MeV)
$^{114}_{46}Pd_{68}$
Scale 0.20 (MeV)
$^{116}_{46}Pd_{70}$
Scale 0.20 (MeV)
$^{118}_{46}Pd_{72}$
Scale 0.20 (MeV)
$^{120}_{46}Pd_{74}$
Scale 0.20 (MeV)
$^{122}_{46}Pd_{76}$
Scale 0.20 (MeV)
$^{124}_{46}Pd_{78}$
Scale 0.40 (MeV)
$^{126}_{46}Pd_{80}$
Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

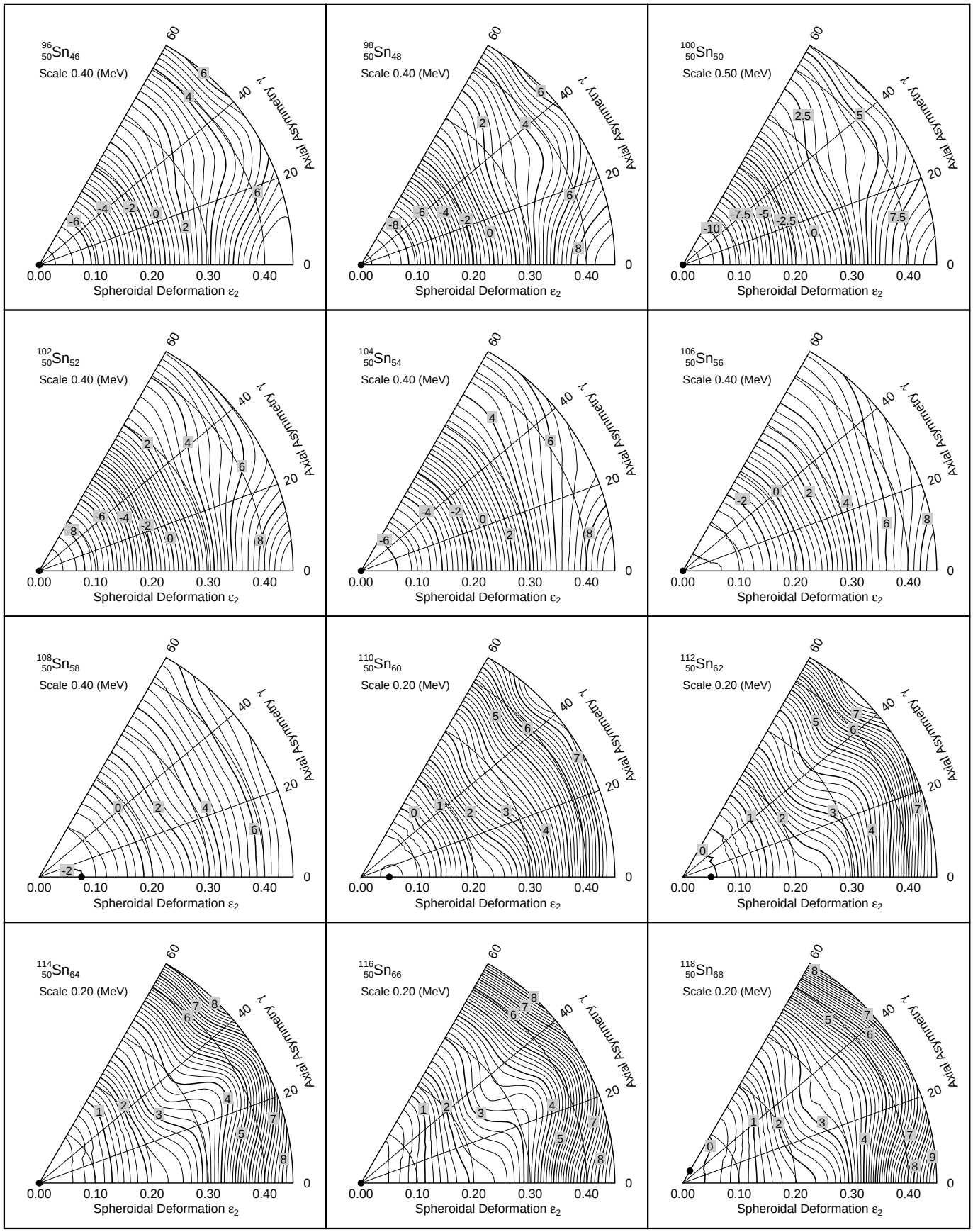
Graph 36


$^{128}_{46}Pd_{82}$ Scale 0.40 (MeV)
$^{90}_{48}Cd_{42}$ Scale 0.20 (MeV)
$^{92}_{48}Cd_{44}$ Scale 0.40 (MeV)
$^{94}_{48}Cd_{46}$ Scale 0.40 (MeV)
$^{96}_{48}Cd_{48}$ Scale 0.40 (MeV)
$^{98}_{48}Cd_{50}$ Scale 0.40 (MeV)
$^{100}_{48}Cd_{52}$ Scale 0.40 (MeV)
$^{102}_{48}Cd_{54}$ Scale 0.40 (MeV)
$^{104}_{48}Cd_{56}$ Scale 0.40 (MeV)
$^{106}_{48}Cd_{58}$ Scale 0.20 (MeV)
$^{108}_{48}Cd_{60}$ Scale 0.20 (MeV)
$^{110}_{48}Cd_{62}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

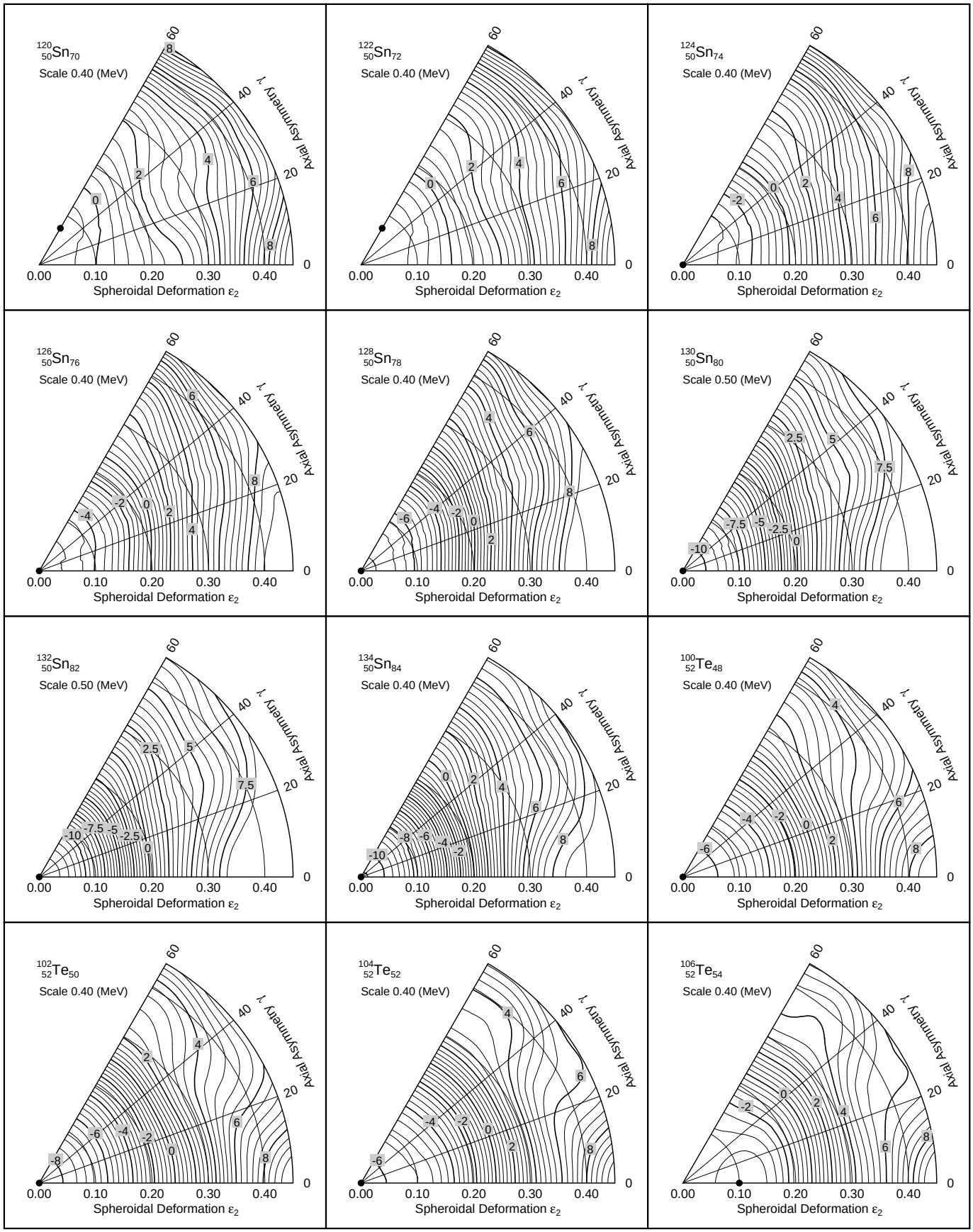
Graph 37


$^{112}_{48}Cd_{64}$
Scale 0.20 (MeV)
$^{114}_{48}Cd_{66}$
Scale 0.20 (MeV)
$^{116}_{48}Cd_{68}$
Scale 0.20 (MeV)
$^{118}_{48}Cd_{70}$
Scale 0.20 (MeV)
$^{120}_{48}Cd_{72}$
Scale 0.20 (MeV)
$^{122}_{48}Cd_{74}$
Scale 0.40 (MeV)
$^{124}_{48}Cd_{76}$
Scale 0.40 (MeV)
$^{126}_{48}Cd_{78}$
Scale 0.40 (MeV)
$^{128}_{48}Cd_{80}$
Scale 0.40 (MeV)
$^{130}_{48}Cd_{82}$
Scale 0.50 (MeV)
$^{132}_{48}Cd_{84}$
Scale 0.40 (MeV)
$^{94}_{50}Sn_{44}$
Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

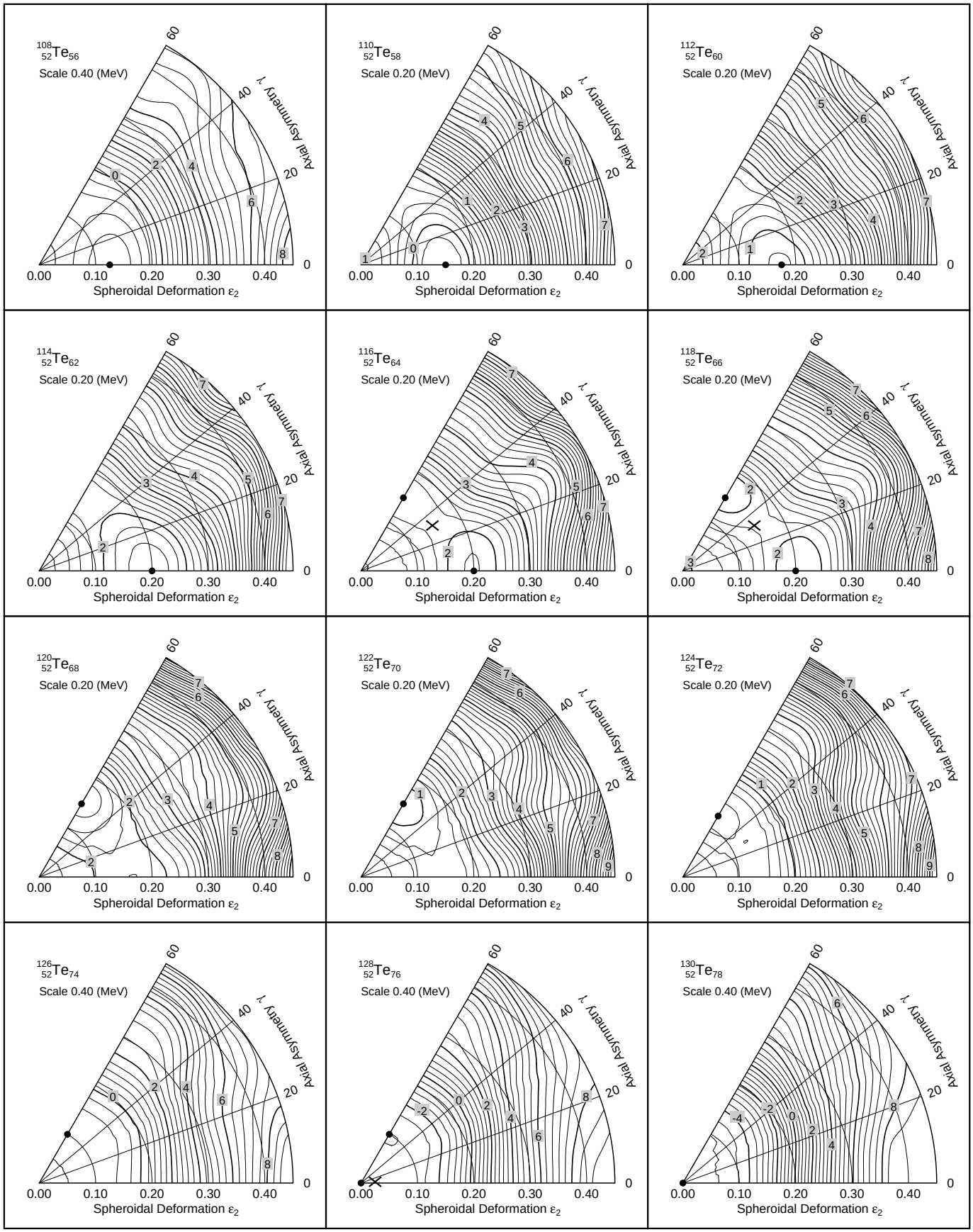
Graph 38


$^{96}_{50}Sn_{46}$ Scale 0.40 (MeV)
$^{98}_{50}Sn_{48}$ Scale 0.40 (MeV)
$^{100}_{50}Sn_{50}$ Scale 0.50 (MeV)
$^{102}_{50}Sn_{52}$ Scale 0.40 (MeV)
$^{104}_{50}Sn_{54}$ Scale 0.40 (MeV)
$^{106}_{50}Sn_{56}$ Scale 0.40 (MeV)
$^{108}_{50}Sn_{58}$ Scale 0.40 (MeV)
$^{110}_{50}Sn_{60}$ Scale 0.20 (MeV)
$^{112}_{50}Sn_{62}$ Scale 0.20 (MeV)
$^{114}_{50}Sn_{64}$ Scale 0.20 (MeV)
$^{116}_{50}Sn_{66}$ Scale 0.20 (MeV)
$^{118}_{50}Sn_{68}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

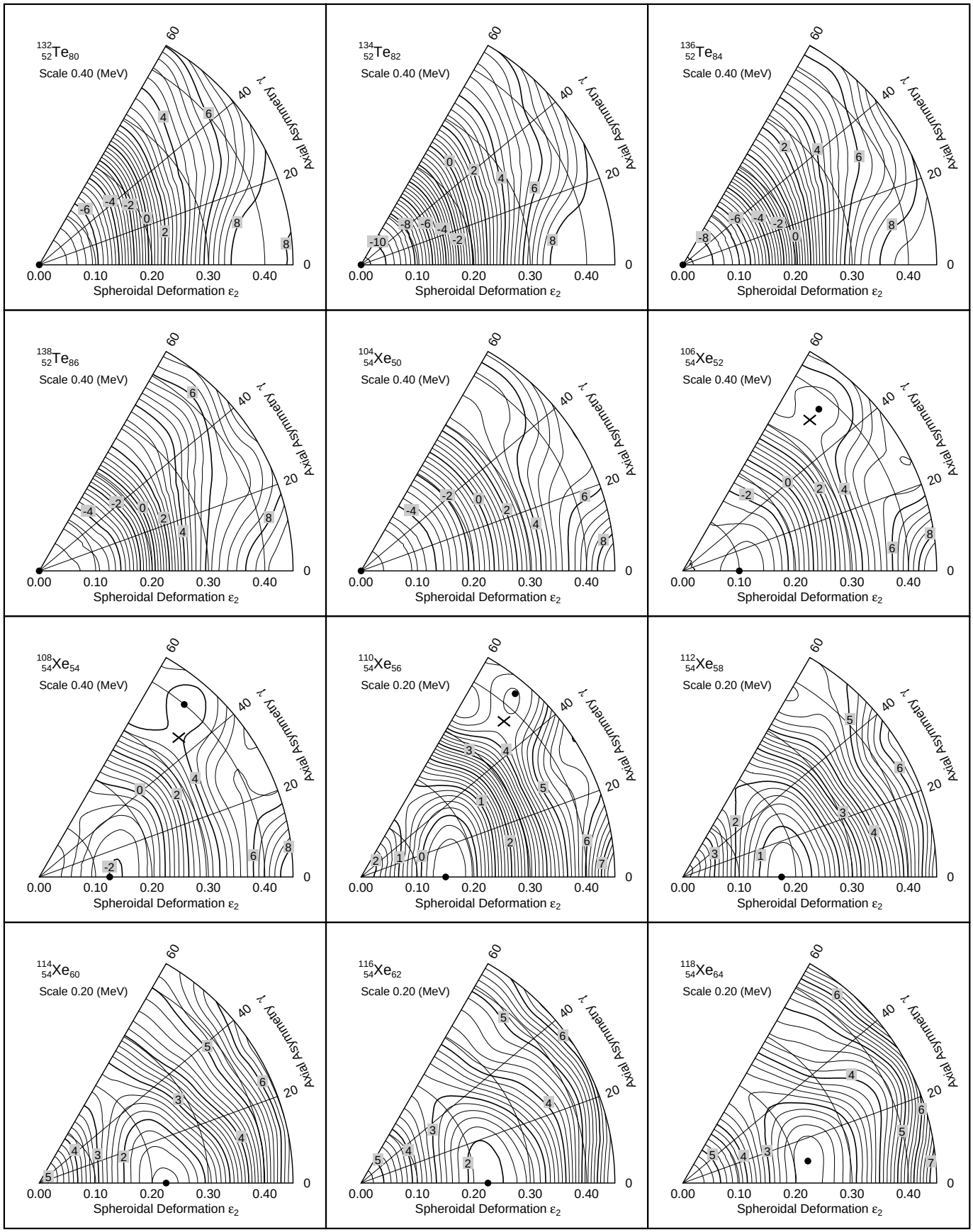
Graph 39


$^{120}_{50}Sn_{70}$ Scale 0.40 (MeV)
$^{122}_{50}Sn_{72}$ Scale 0.40 (MeV)
$^{124}_{50}Sn_{74}$ Scale 0.40 (MeV)
$^{126}_{50}Sn_{76}$ Scale 0.40 (MeV)
$^{128}_{50}Sn_{78}$ Scale 0.40 (MeV)
$^{130}_{50}Sn_{80}$ Scale 0.50 (MeV)
$^{132}_{50}Sn_{82}$ Scale 0.50 (MeV)
$^{134}_{50}Sn_{84}$ Scale 0.40 (MeV)
$^{100}_{52}Te_{48}$ Scale 0.40 (MeV)
$^{102}_{52}Te_{50}$ Scale 0.40 (MeV)
$^{104}_{52}Te_{52}$ Scale 0.40 (MeV)
$^{106}_{52}Te_{54}$ Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

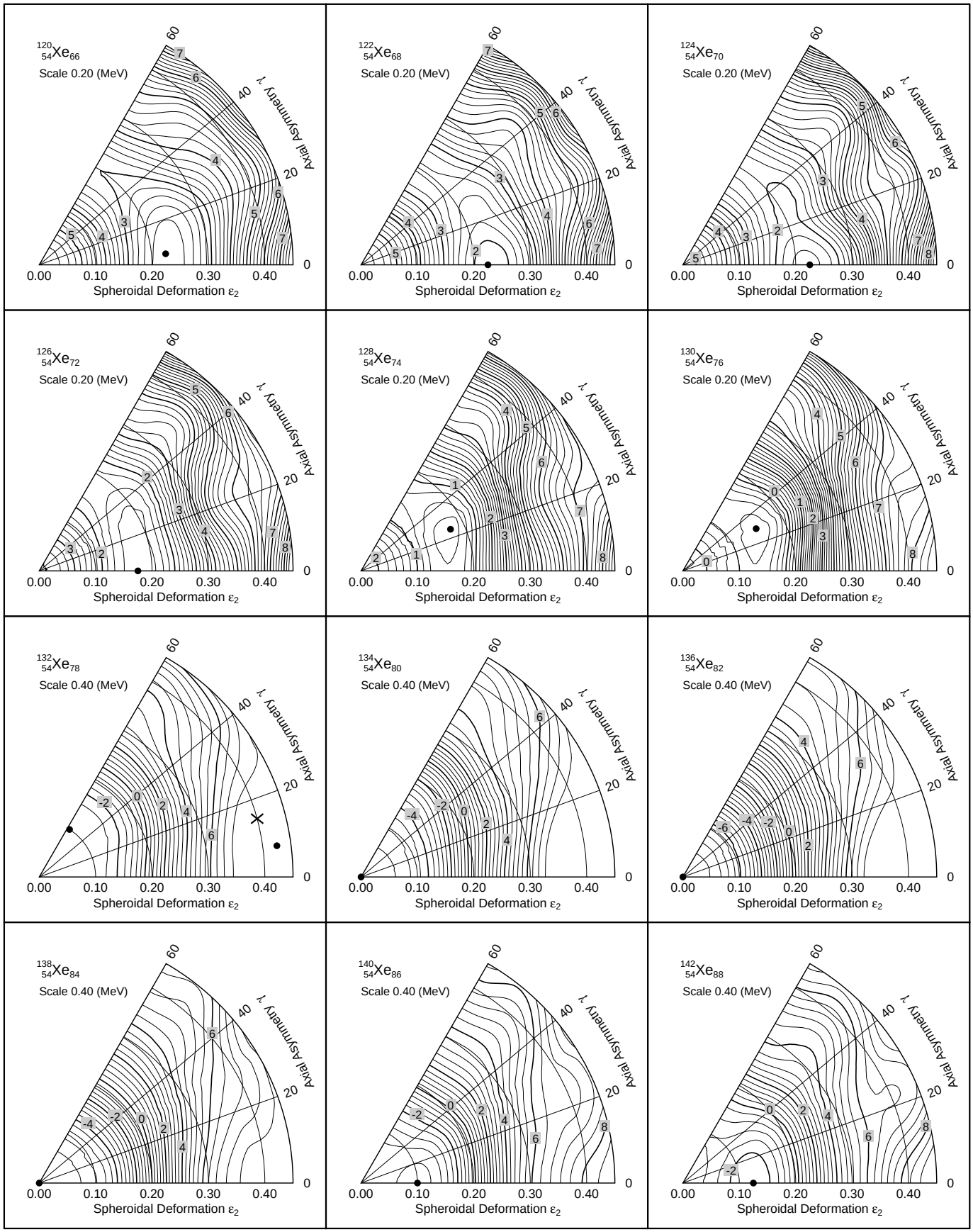
Graph 40


$^{108}_{52}Te_{56}$ Scale 0.40 (MeV)
$^{110}_{52}Te_{58}$ Scale 0.20 (MeV)
$^{112}_{52}Te_{60}$ Scale 0.20 (MeV)
$^{114}_{52}Te_{62}$ Scale 0.20 (MeV)
$^{116}_{52}Te_{64}$ Scale 0.20 (MeV)
$^{118}_{52}Te_{66}$ Scale 0.20 (MeV)
$^{120}_{52}Te_{68}$ Scale 0.20 (MeV)
$^{122}_{52}Te_{70}$ Scale 0.20 (MeV)
$^{124}_{52}Te_{72}$ Scale 0.20 (MeV)
$^{126}_{52}Te_{74}$ Scale 0.40 (MeV)
$^{128}_{52}Te_{76}$ Scale 0.40 (MeV)
$^{130}_{52}Te_{78}$ Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

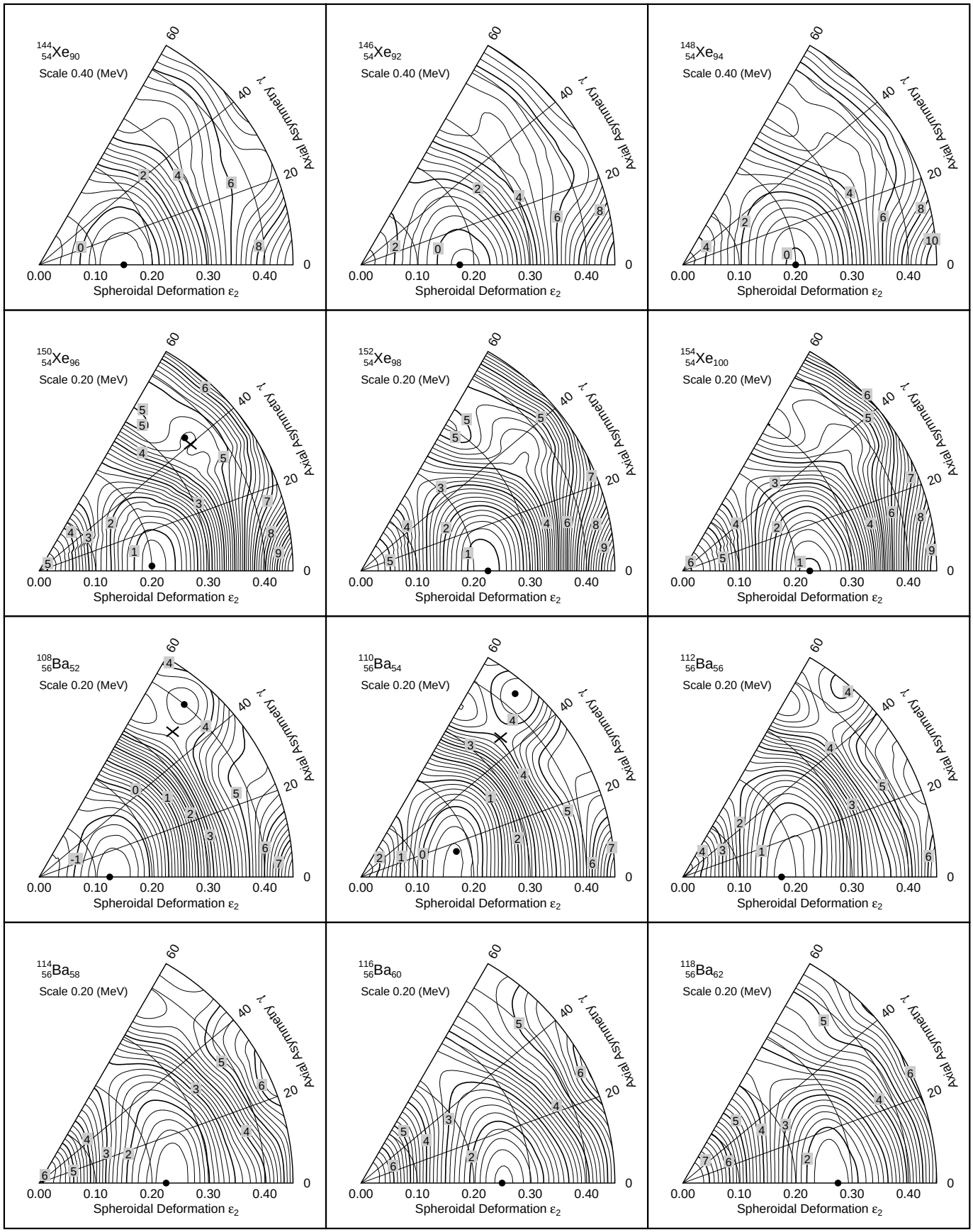
Graph 41


$^{132}_{52}Te_{80}$ Scale 0.40 (MeV)
$^{134}_{52}Te_{82}$ Scale 0.40 (MeV)
$^{136}_{52}Te_{84}$ Scale 0.40 (MeV)
$^{138}_{52}Te_{86}$ Scale 0.40 (MeV)
$^{104}_{54}Xe_{50}$ Scale 0.40 (MeV)
$^{106}_{54}Xe_{52}$ Scale 0.40 (MeV)
$^{108}_{54}Xe_{54}$ Scale 0.40 (MeV)
$^{110}_{54}Xe_{56}$ Scale 0.20 (MeV)
$^{112}_{54}Xe_{58}$ Scale 0.20 (MeV)
$^{114}_{54}Xe_{60}$ Scale 0.20 (MeV)
$^{116}_{54}Xe_{62}$ Scale 0.20 (MeV)
$^{118}_{54}Xe_{64}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

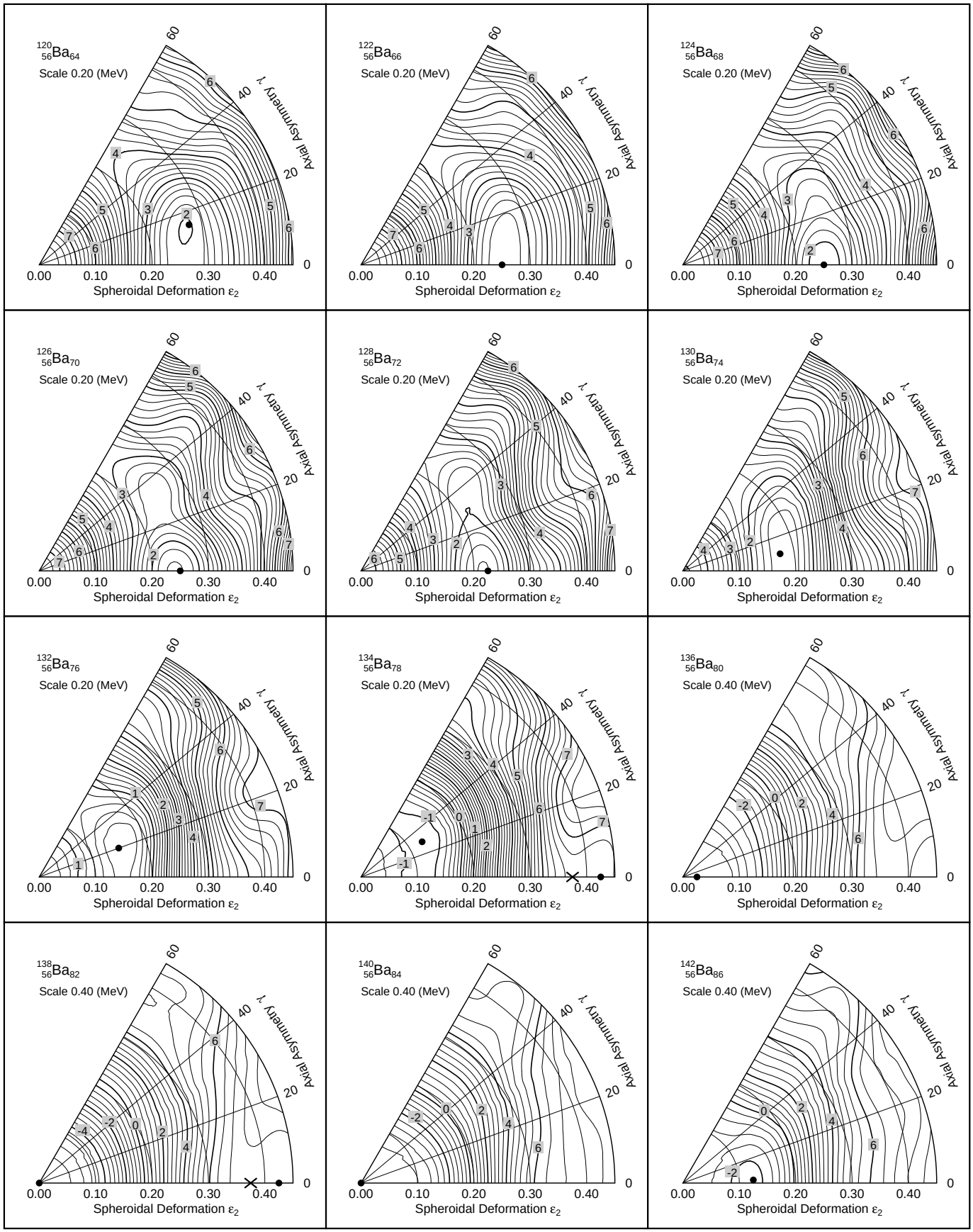
Graph 42


$^{120}_{54}Xe_{66}$ Scale 0.20 (MeV)
$^{122}_{54}Xe_{68}$ Scale 0.20 (MeV)
$^{124}_{54}Xe_{70}$ Scale 0.20 (MeV)
$^{126}_{54}Xe_{72}$ Scale 0.20 (MeV)
$^{128}_{54}Xe_{74}$ Scale 0.20 (MeV)
$^{130}_{54}Xe_{76}$ Scale 0.20 (MeV)
$^{132}_{54}Xe_{78}$ Scale 0.40 (MeV)
$^{134}_{54}Xe_{80}$ Scale 0.40 (MeV)
$^{136}_{54}Xe_{82}$ Scale 0.40 (MeV)
$^{138}_{54}Xe_{84}$ Scale 0.40 (MeV)
$^{140}_{54}Xe_{86}$ Scale 0.40 (MeV)
$^{142}_{54}Xe_{88}$ Scale 0.40 (MeV)
Axial Asymmetry γ
60
40
20
0
0.00 0.10 0.20 0.30 0.40
Spheroidal Deformation ε_2

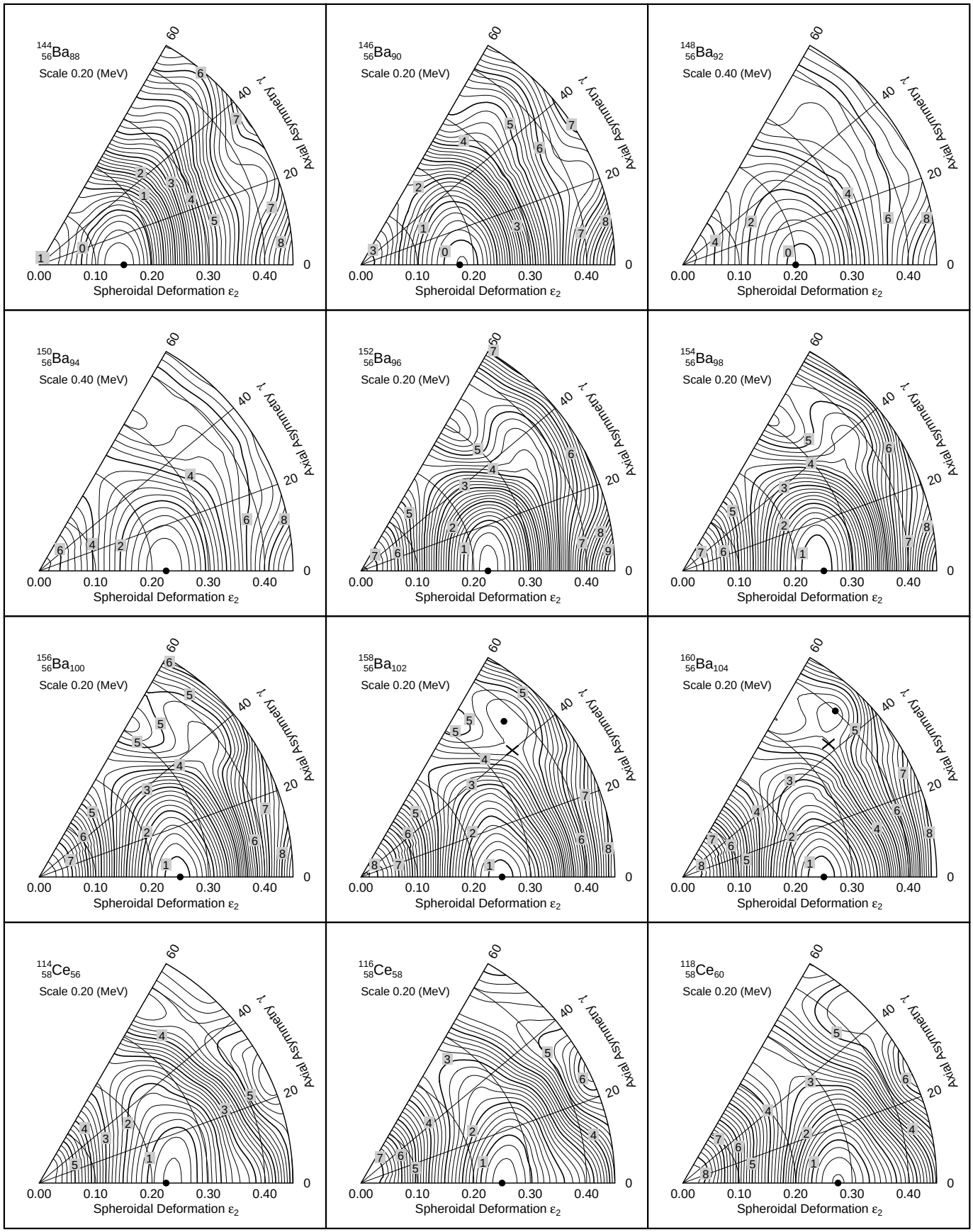
Graph 43


$^{144}_{54}Xe_{90}$
Scale 0.40 (MeV)
$^{146}_{54}Xe_{92}$
Scale 0.40 (MeV)
$^{148}_{54}Xe_{94}$
Scale 0.40 (MeV)
$^{150}_{54}Xe_{96}$
Scale 0.20 (MeV)
$^{152}_{54}Xe_{98}$
Scale 0.20 (MeV)
$^{154}_{54}Xe_{100}$
Scale 0.20 (MeV)
$^{108}_{56}Ba_{52}$
Scale 0.20 (MeV)
$^{110}_{56}Ba_{54}$
Scale 0.20 (MeV)
$^{112}_{56}Ba_{56}$
Scale 0.20 (MeV)
$^{114}_{56}Ba_{58}$
Scale 0.20 (MeV)
$^{116}_{56}Ba_{60}$
Scale 0.20 (MeV)
$^{118}_{56}Ba_{62}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

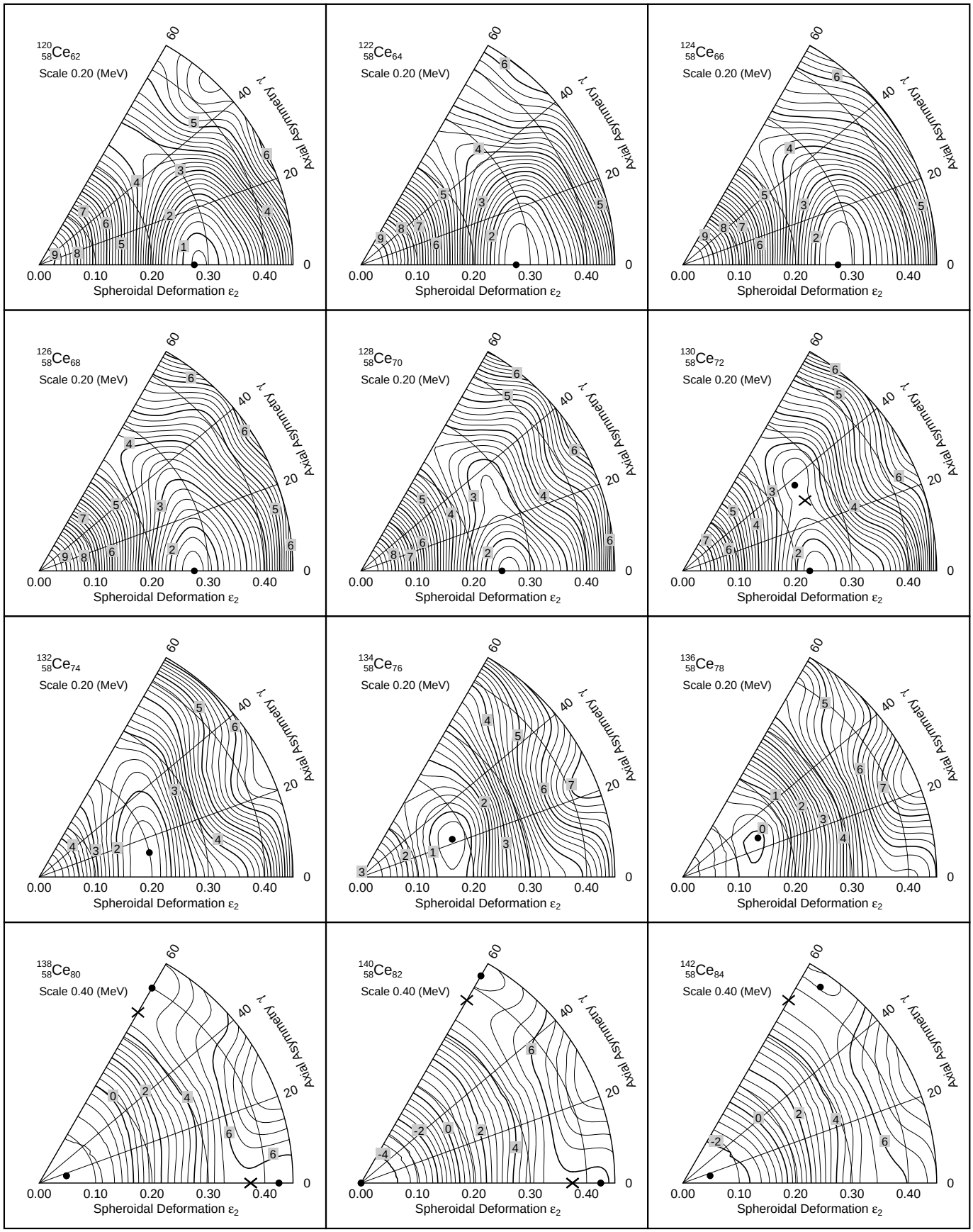
Graph 44


$^{120}_{56}Ba_{64}$ Scale 0.20 (MeV)
$^{122}_{56}Ba_{66}$ Scale 0.20 (MeV)
$^{124}_{56}Ba_{68}$ Scale 0.20 (MeV)
$^{126}_{56}Ba_{70}$ Scale 0.20 (MeV)
$^{128}_{56}Ba_{72}$ Scale 0.20 (MeV)
$^{130}_{56}Ba_{74}$ Scale 0.20 (MeV)
$^{132}_{56}Ba_{76}$ Scale 0.20 (MeV)
$^{134}_{56}Ba_{78}$ Scale 0.20 (MeV)
$^{136}_{56}Ba_{80}$ Scale 0.40 (MeV)
$^{138}_{56}Ba_{82}$ Scale 0.40 (MeV)
$^{140}_{56}Ba_{84}$ Scale 0.40 (MeV)
$^{142}_{56}Ba_{86}$ Scale 0.40 (MeV)
Axial Asymmetry γ
60
40
20
0
0.00 0.10 0.20 0.30 0.40
Spheroidal Deformation ε_2

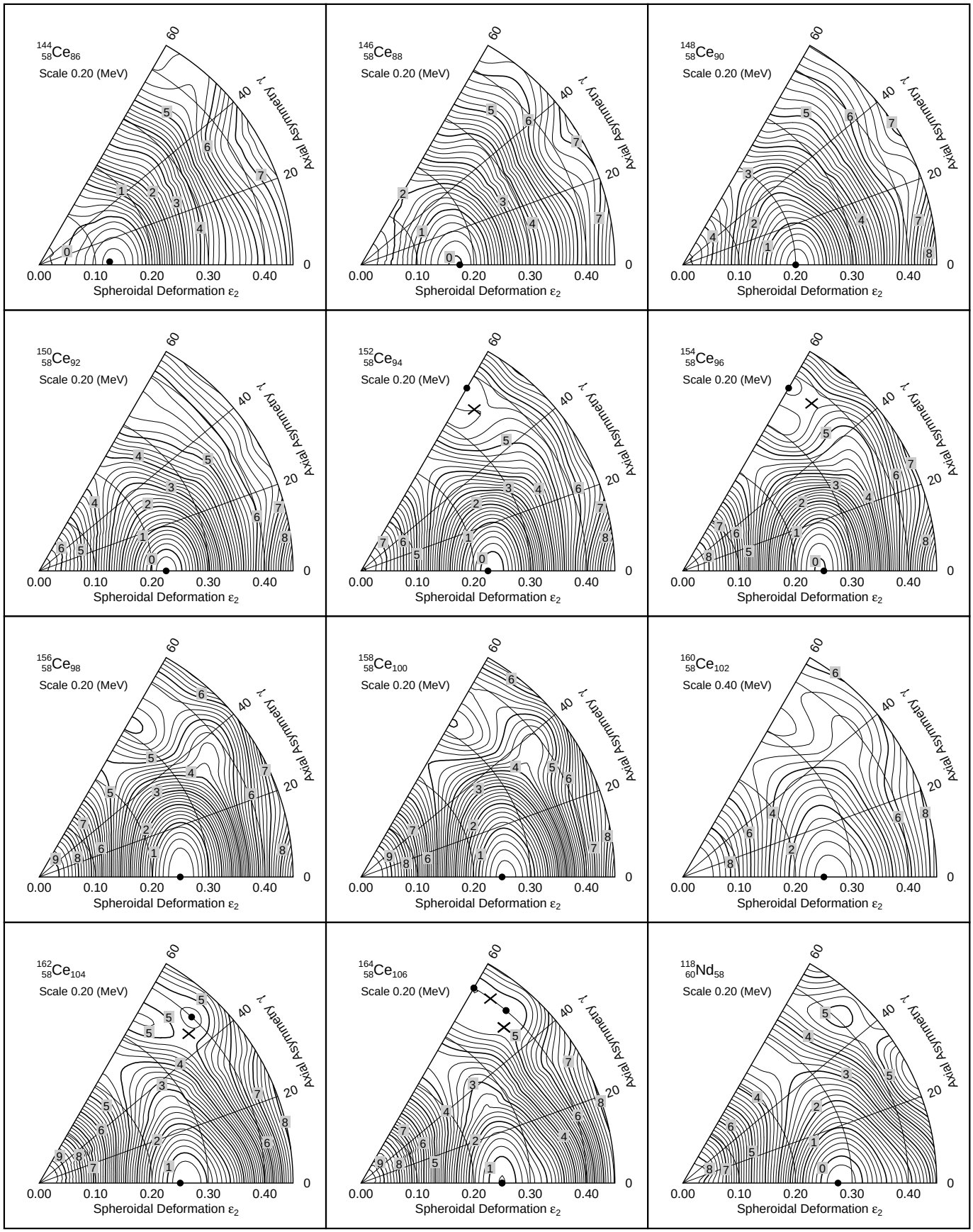
Graph 45


144 56 Ba 88
Scale 0.20 (MeV)
146 56 Ba 90
Scale 0.20 (MeV)
148 56 Ba 92
Scale 0.40 (MeV)
150 56 Ba 94
Scale 0.40 (MeV)
152 56 Ba 96
Scale 0.20 (MeV)
154 56 Ba 98
Scale 0.20 (MeV)
156 56 Ba 100
Scale 0.20 (MeV)
158 56 Ba 102
Scale 0.20 (MeV)
160 56 Ba 104
Scale 0.20 (MeV)
114 58 Ce 56
Scale 0.20 (MeV)
116 58 Ce 58
Scale 0.20 (MeV)
118 58 Ce 60
Scale 0.20 (MeV)
Axial Asymmetry γ
60
40
20
0
0.00 0.10 0.20 0.30 0.40
Spheroidal Deformation ε2

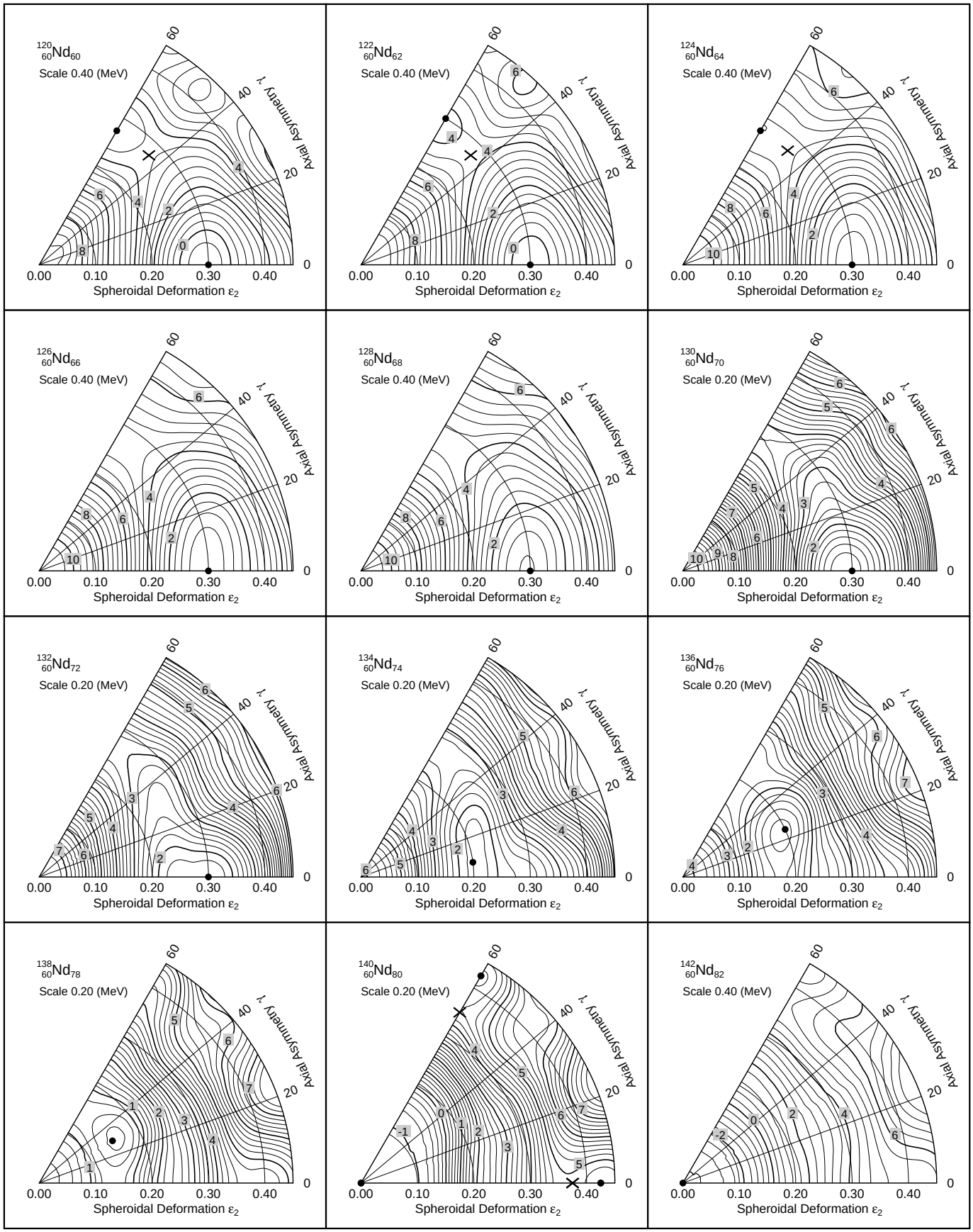
Graph 46


$^{120}_{58}Ce_{62}$ Scale 0.20 (MeV)
$^{122}_{58}Ce_{64}$ Scale 0.20 (MeV)
$^{124}_{58}Ce_{66}$ Scale 0.20 (MeV)
$^{126}_{58}Ce_{68}$ Scale 0.20 (MeV)
$^{128}_{58}Ce_{70}$ Scale 0.20 (MeV)
$^{130}_{58}Ce_{72}$ Scale 0.20 (MeV)
$^{132}_{58}Ce_{74}$ Scale 0.20 (MeV)
$^{134}_{58}Ce_{76}$ Scale 0.20 (MeV)
$^{136}_{58}Ce_{78}$ Scale 0.20 (MeV)
$^{138}_{58}Ce_{80}$ Scale 0.40 (MeV)
$^{140}_{58}Ce_{82}$ Scale 0.40 (MeV)
$^{142}_{58}Ce_{84}$ Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

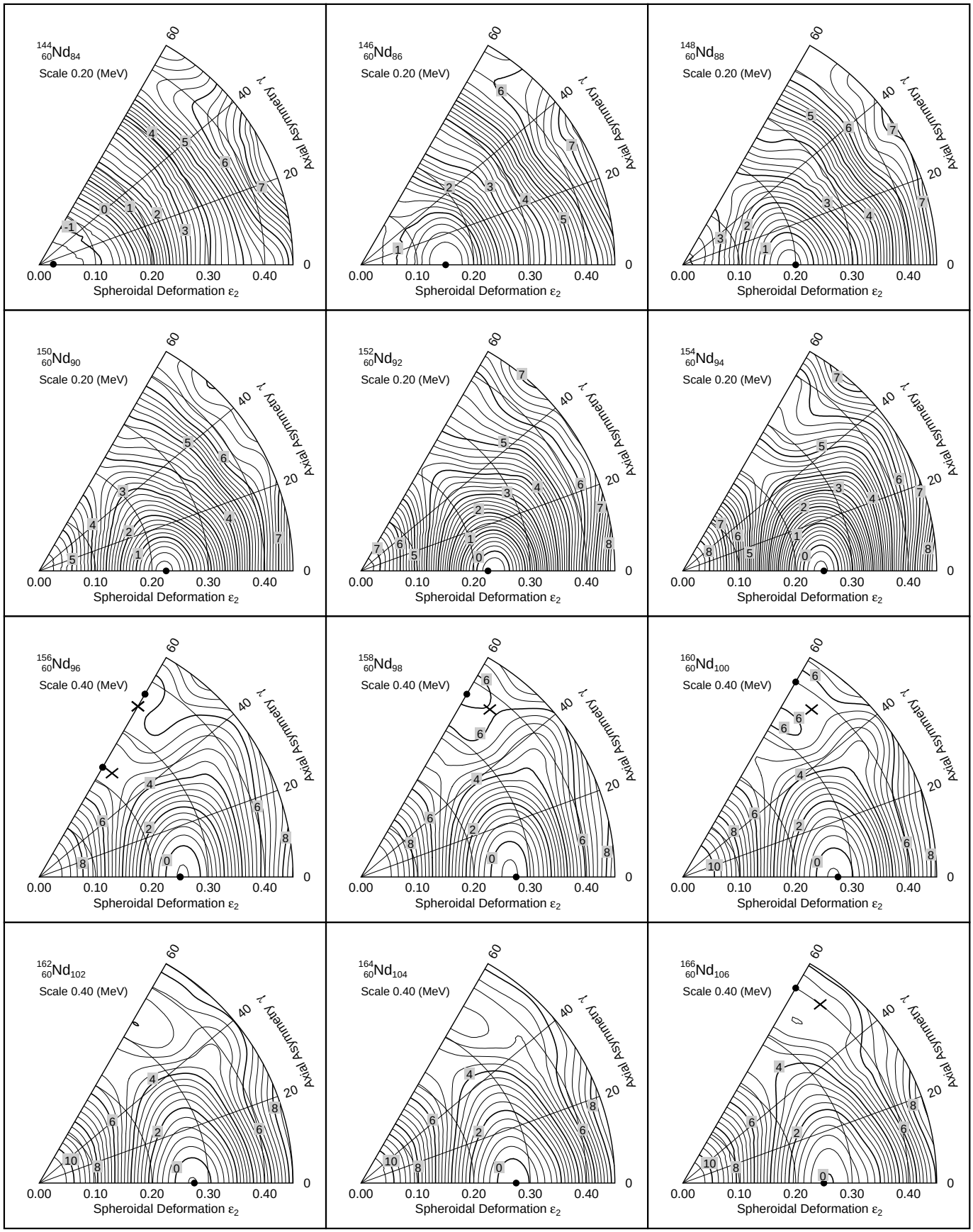
Graph 47


$^{144}_{58}Ce_{86}$ Scale 0.20 (MeV)
$^{146}_{58}Ce_{88}$ Scale 0.20 (MeV)
$^{148}_{58}Ce_{90}$ Scale 0.20 (MeV)
$^{150}_{58}Ce_{92}$ Scale 0.20 (MeV)
$^{152}_{58}Ce_{94}$ Scale 0.20 (MeV)
$^{154}_{58}Ce_{96}$ Scale 0.20 (MeV)
$^{156}_{58}Ce_{98}$ Scale 0.20 (MeV)
$^{158}_{58}Ce_{100}$ Scale 0.20 (MeV)
$^{160}_{58}Ce_{102}$ Scale 0.40 (MeV)
$^{162}_{58}Ce_{104}$ Scale 0.20 (MeV)
$^{164}_{58}Ce_{106}$ Scale 0.20 (MeV)
$^{118}_{60}Nd_{58}$ Scale 0.20 (MeV)
Axial Asymmetry γ
60
40
20
0
0.00 0.10 0.20 0.30 0.40
Spheroidal Deformation ε_2

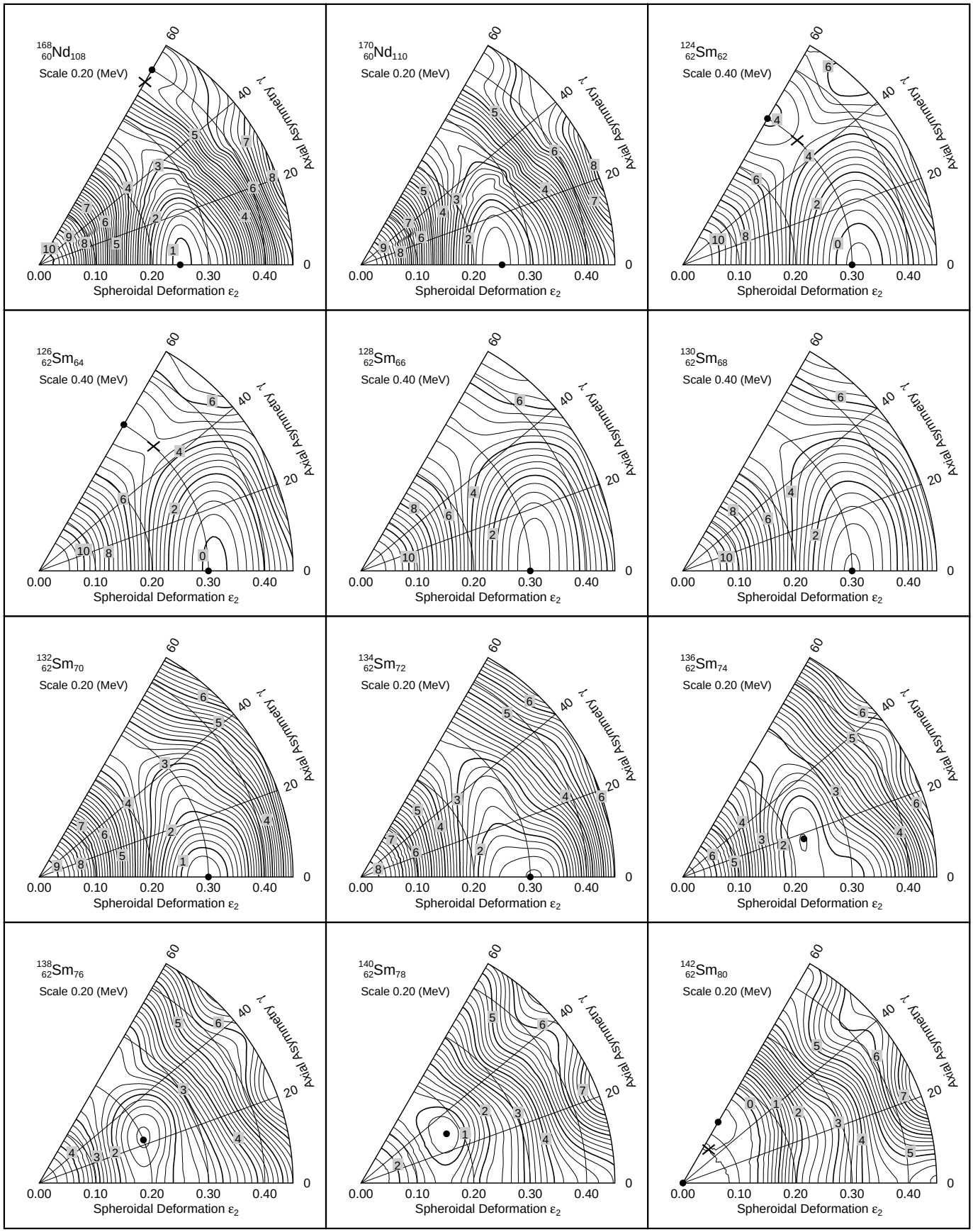
Graph 48


$^{120}_{60}Nd_{60}$ Scale 0.40 (MeV)
$^{122}_{60}Nd_{62}$ Scale 0.40 (MeV)
$^{124}_{60}Nd_{64}$ Scale 0.40 (MeV)
$^{126}_{60}Nd_{66}$ Scale 0.40 (MeV)
$^{128}_{60}Nd_{68}$ Scale 0.40 (MeV)
$^{130}_{60}Nd_{70}$ Scale 0.20 (MeV)
$^{132}_{60}Nd_{72}$ Scale 0.20 (MeV)
$^{134}_{60}Nd_{74}$ Scale 0.20 (MeV)
$^{136}_{60}Nd_{76}$ Scale 0.20 (MeV)
$^{138}_{60}Nd_{78}$ Scale 0.20 (MeV)
$^{140}_{60}Nd_{80}$ Scale 0.20 (MeV)
$^{142}_{60}Nd_{82}$ Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

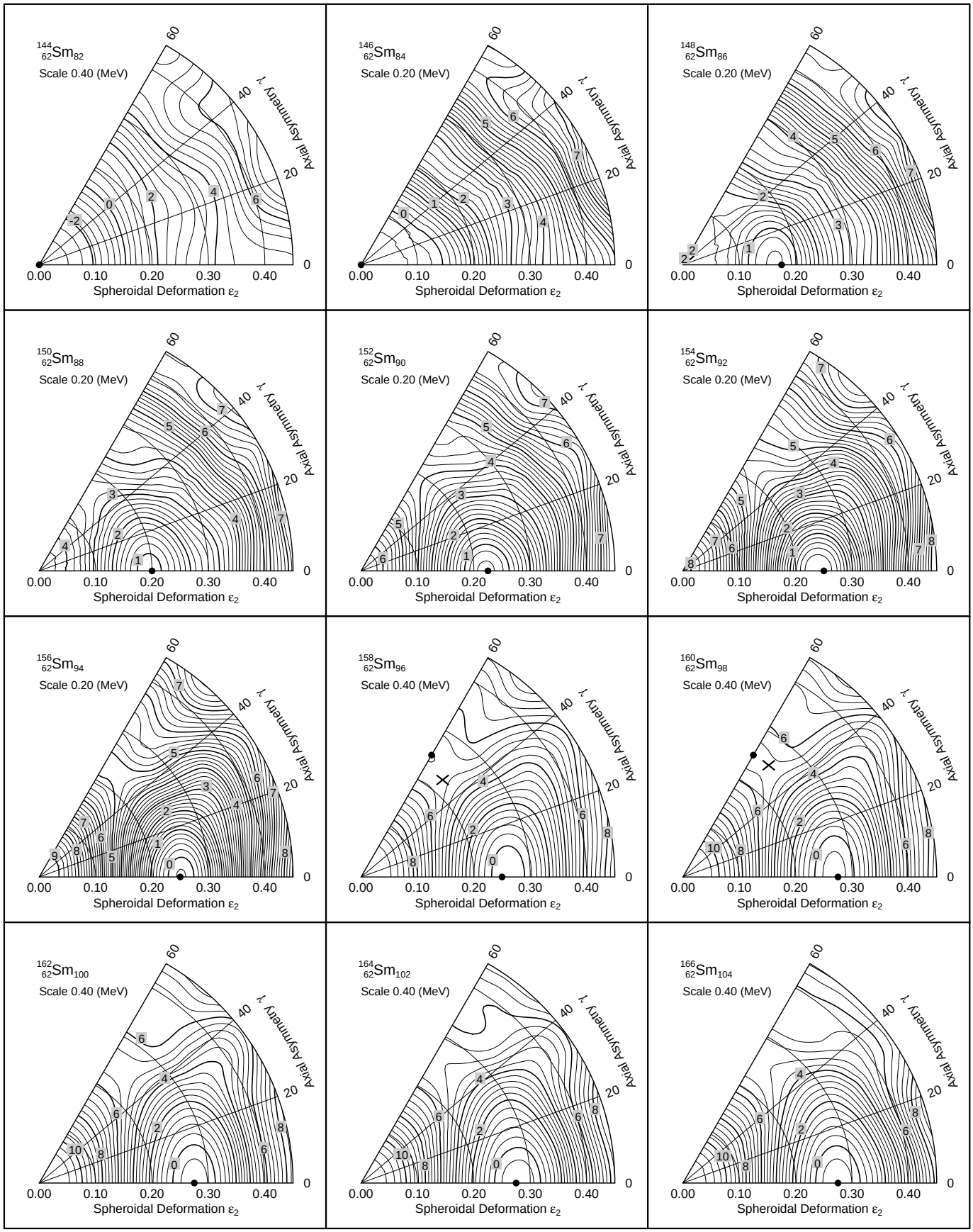
Graph 49


$^{144}_{60}Nd_{84}$ Scale 0.20 (MeV)
$^{146}_{60}Nd_{86}$ Scale 0.20 (MeV)
$^{148}_{60}Nd_{88}$ Scale 0.20 (MeV)
$^{150}_{60}Nd_{90}$ Scale 0.20 (MeV)
$^{152}_{60}Nd_{92}$ Scale 0.20 (MeV)
$^{154}_{60}Nd_{94}$ Scale 0.20 (MeV)
$^{156}_{60}Nd_{96}$ Scale 0.40 (MeV)
$^{158}_{60}Nd_{98}$ Scale 0.40 (MeV)
$^{160}_{60}Nd_{100}$ Scale 0.40 (MeV)
$^{162}_{60}Nd_{102}$ Scale 0.40 (MeV)
$^{164}_{60}Nd_{104}$ Scale 0.40 (MeV)
$^{166}_{60}Nd_{106}$ Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

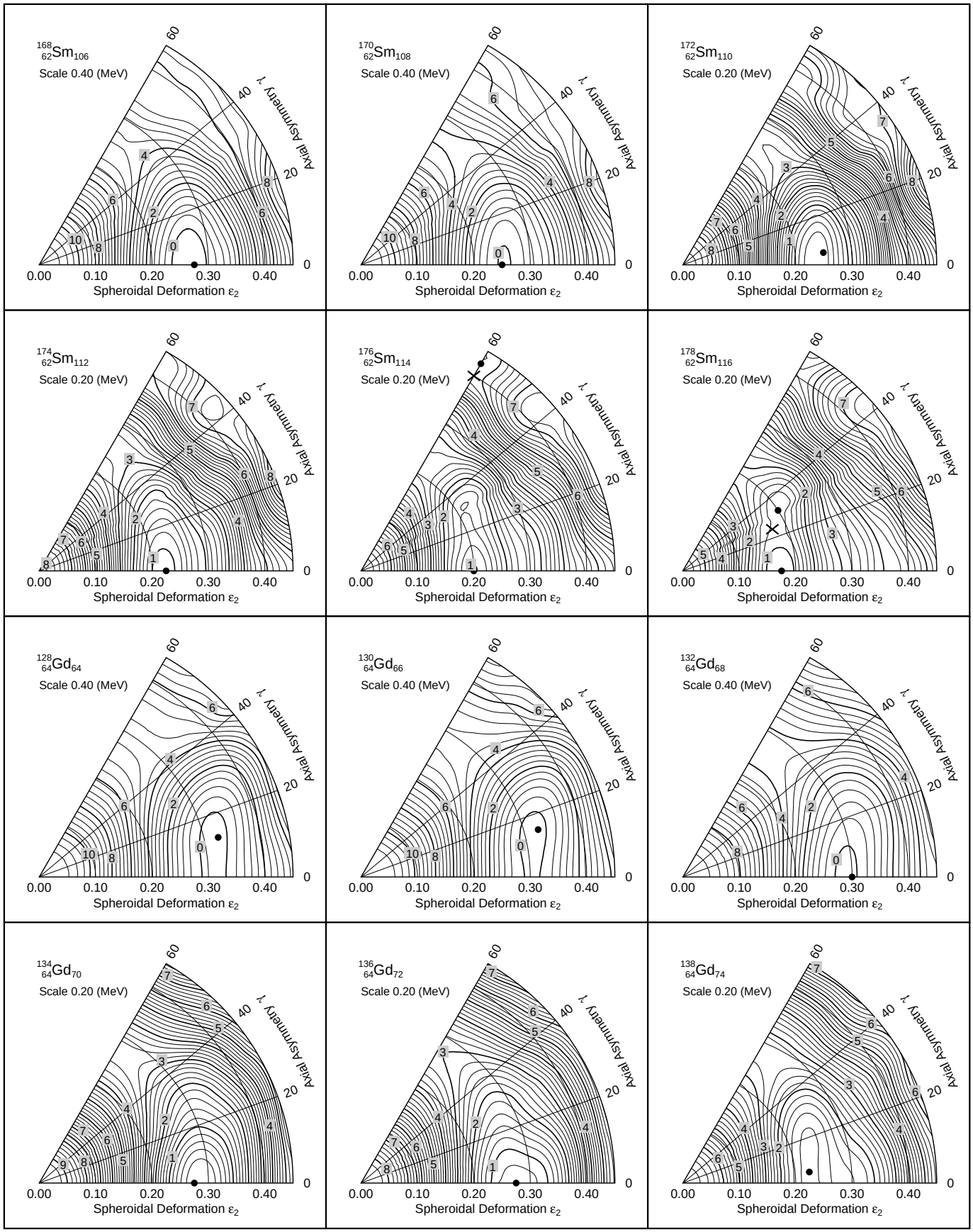
Graph 50


$^{168}_{60}Nd_{108}$ Scale 0.20 (MeV)
$^{170}_{60}Nd_{110}$ Scale 0.20 (MeV)
$^{124}_{62}Sm_{62}$ Scale 0.40 (MeV)
$^{126}_{62}Sm_{64}$ Scale 0.40 (MeV)
$^{128}_{62}Sm_{66}$ Scale 0.40 (MeV)
$^{130}_{62}Sm_{68}$ Scale 0.40 (MeV)
$^{132}_{62}Sm_{70}$ Scale 0.20 (MeV)
$^{134}_{62}Sm_{72}$ Scale 0.20 (MeV)
$^{136}_{62}Sm_{74}$ Scale 0.20 (MeV)
$^{138}_{62}Sm_{76}$ Scale 0.20 (MeV)
$^{140}_{62}Sm_{78}$ Scale 0.20 (MeV)
$^{142}_{62}Sm_{80}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

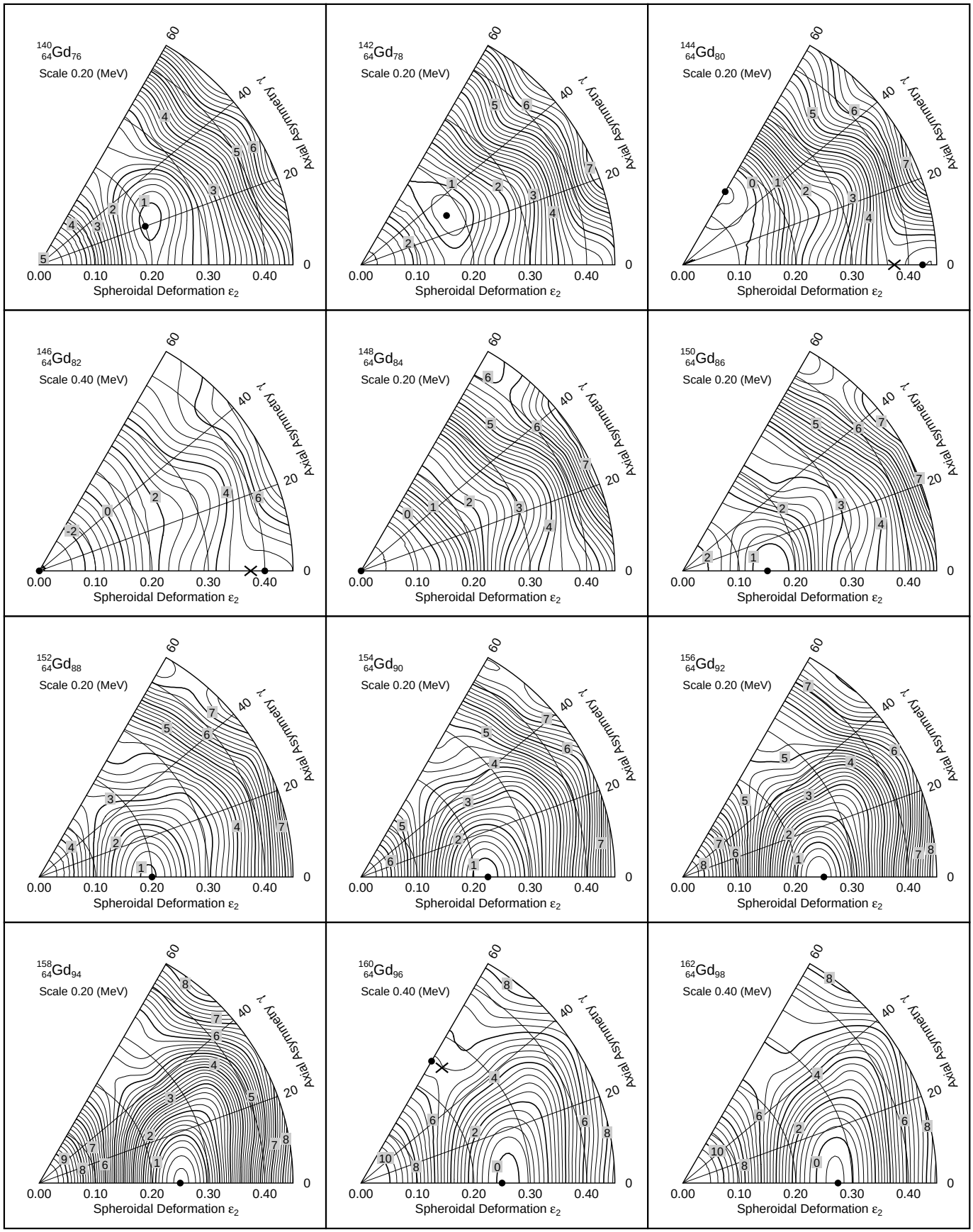
Graph 51


$^{144}_{62}Sm_{82}$ Scale 0.40 (MeV)
$^{146}_{62}Sm_{84}$ Scale 0.20 (MeV)
$^{148}_{62}Sm_{86}$ Scale 0.20 (MeV)
$^{150}_{62}Sm_{88}$ Scale 0.20 (MeV)
$^{152}_{62}Sm_{90}$ Scale 0.20 (MeV)
$^{154}_{62}Sm_{92}$ Scale 0.20 (MeV)
$^{156}_{62}Sm_{94}$ Scale 0.20 (MeV)
$^{158}_{62}Sm_{96}$ Scale 0.40 (MeV)
$^{160}_{62}Sm_{98}$ Scale 0.40 (MeV)
$^{162}_{62}Sm_{100}$ Scale 0.40 (MeV)
$^{164}_{62}Sm_{102}$ Scale 0.40 (MeV)
$^{166}_{62}Sm_{104}$ Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

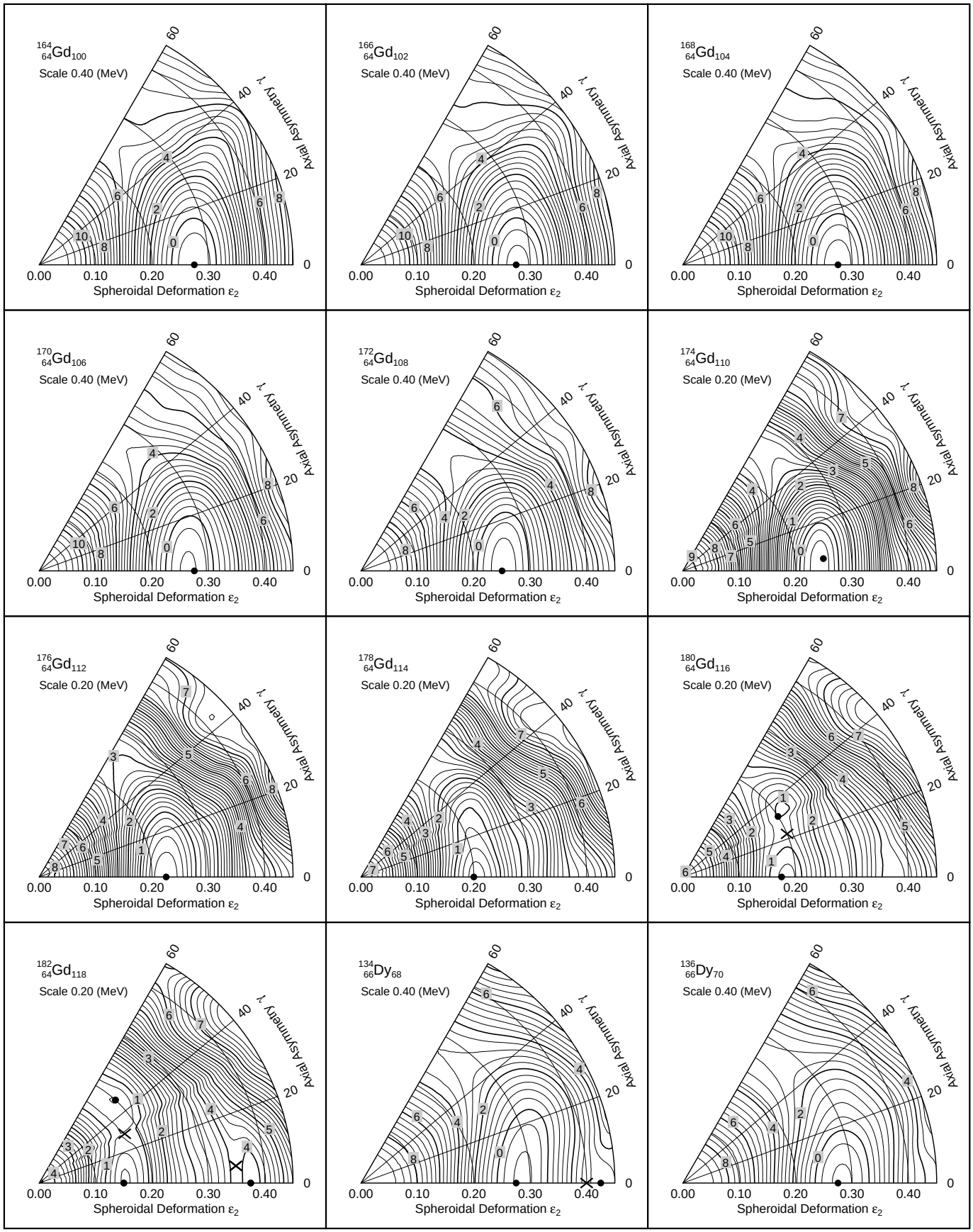
Graph 52


$^{168}_{62}Sm_{106}$ Scale 0.40 (MeV)
$^{170}_{62}Sm_{108}$ Scale 0.40 (MeV)
$^{172}_{62}Sm_{110}$ Scale 0.20 (MeV)
$^{174}_{62}Sm_{112}$ Scale 0.20 (MeV)
$^{176}_{62}Sm_{114}$ Scale 0.20 (MeV)
$^{178}_{62}Sm_{116}$ Scale 0.20 (MeV)
$^{128}_{64}Gd_{64}$ Scale 0.40 (MeV)
$^{130}_{64}Gd_{66}$ Scale 0.40 (MeV)
$^{132}_{64}Gd_{68}$ Scale 0.40 (MeV)
$^{134}_{64}Gd_{70}$ Scale 0.20 (MeV)
$^{136}_{64}Gd_{72}$ Scale 0.20 (MeV)
$^{138}_{64}Gd_{74}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

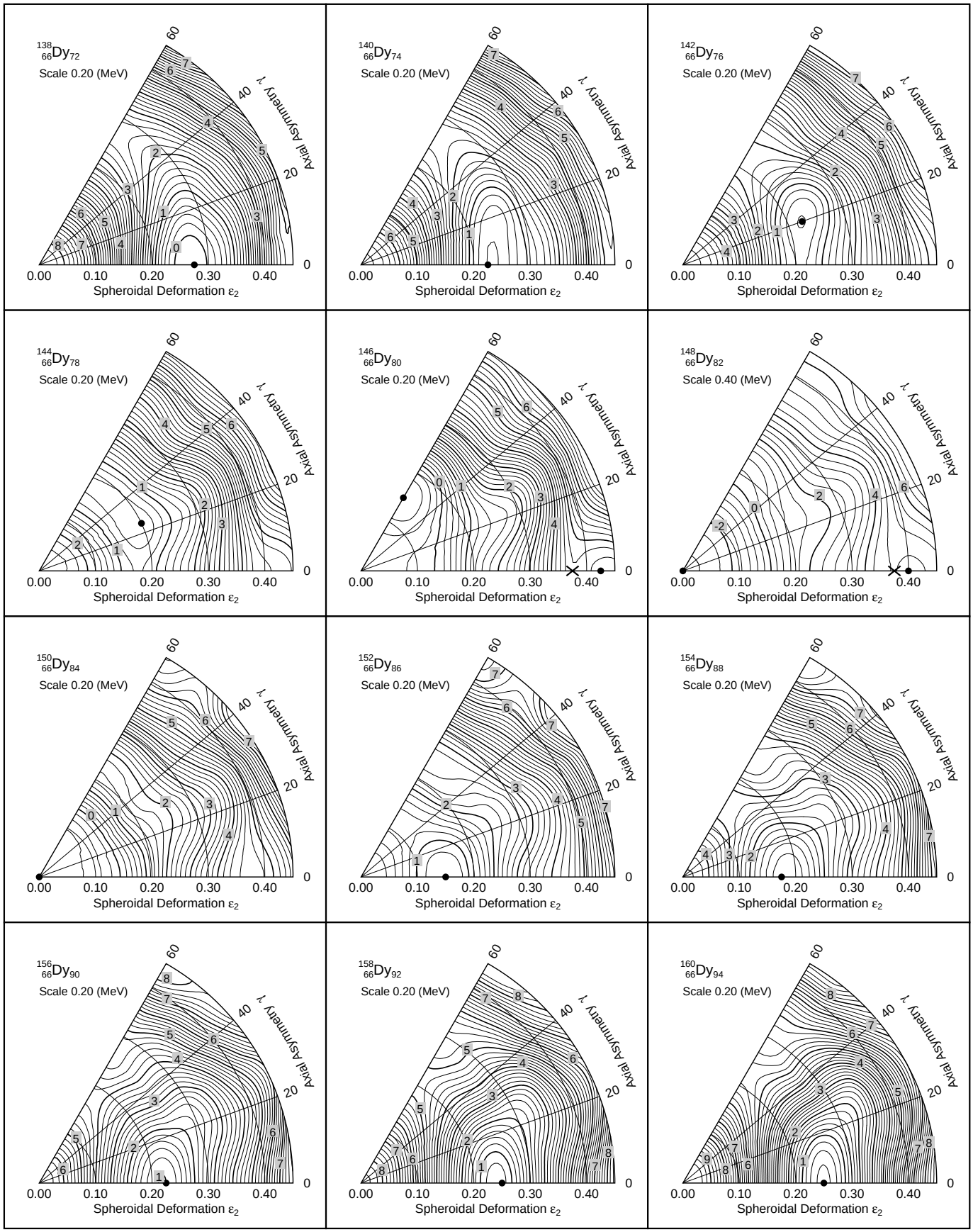
Graph 53


$^{140}_{64}Gd_{76}$ Scale 0.20 (MeV)
$^{142}_{64}Gd_{78}$ Scale 0.20 (MeV)
$^{144}_{64}Gd_{80}$ Scale 0.20 (MeV)
$^{146}_{64}Gd_{82}$ Scale 0.40 (MeV)
$^{148}_{64}Gd_{84}$ Scale 0.20 (MeV)
$^{150}_{64}Gd_{86}$ Scale 0.20 (MeV)
$^{152}_{64}Gd_{88}$ Scale 0.20 (MeV)
$^{154}_{64}Gd_{90}$ Scale 0.20 (MeV)
$^{156}_{64}Gd_{92}$ Scale 0.20 (MeV)
$^{158}_{64}Gd_{94}$ Scale 0.20 (MeV)
$^{160}_{64}Gd_{96}$ Scale 0.40 (MeV)
$^{162}_{64}Gd_{98}$ Scale 0.40 (MeV)
Axial Asymmetry γ
60
40
20
0
0.00 0.10 0.20 0.30 0.40
Spheroidal Deformation ε_2

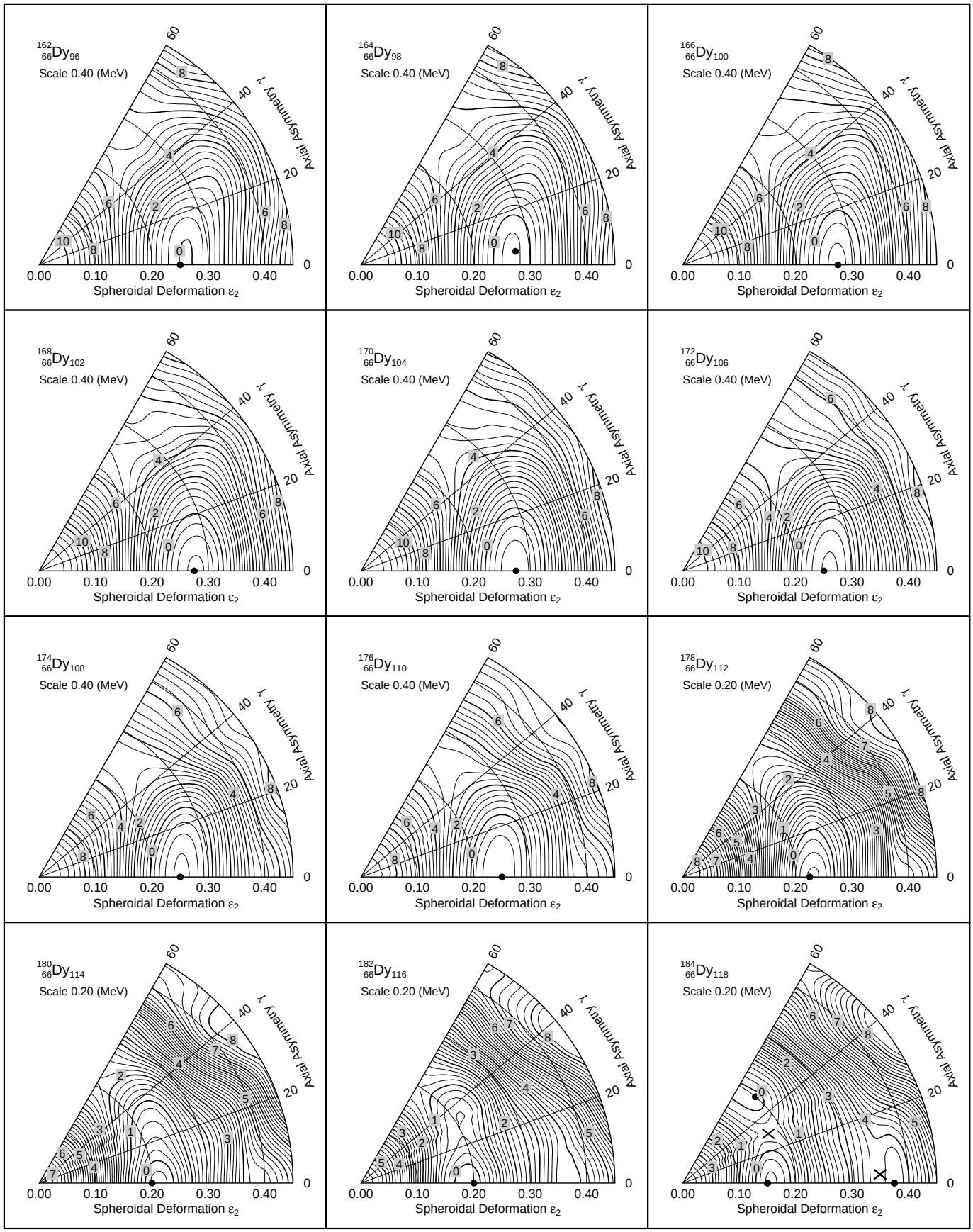
Graph 54


$^{164}_{64}Gd_{100}$
Scale 0.40 (MeV)
$^{166}_{64}Gd_{102}$
Scale 0.40 (MeV)
$^{168}_{64}Gd_{104}$
Scale 0.40 (MeV)
$^{170}_{64}Gd_{106}$
Scale 0.40 (MeV)
$^{172}_{64}Gd_{108}$
Scale 0.40 (MeV)
$^{174}_{64}Gd_{110}$
Scale 0.20 (MeV)
$^{176}_{64}Gd_{112}$
Scale 0.20 (MeV)
$^{178}_{64}Gd_{114}$
Scale 0.20 (MeV)
$^{180}_{64}Gd_{116}$
Scale 0.20 (MeV)
$^{182}_{64}Gd_{118}$
Scale 0.20 (MeV)
$^{134}_{66}Dy_{68}$
Scale 0.40 (MeV)
$^{136}_{66}Dy_{70}$
Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

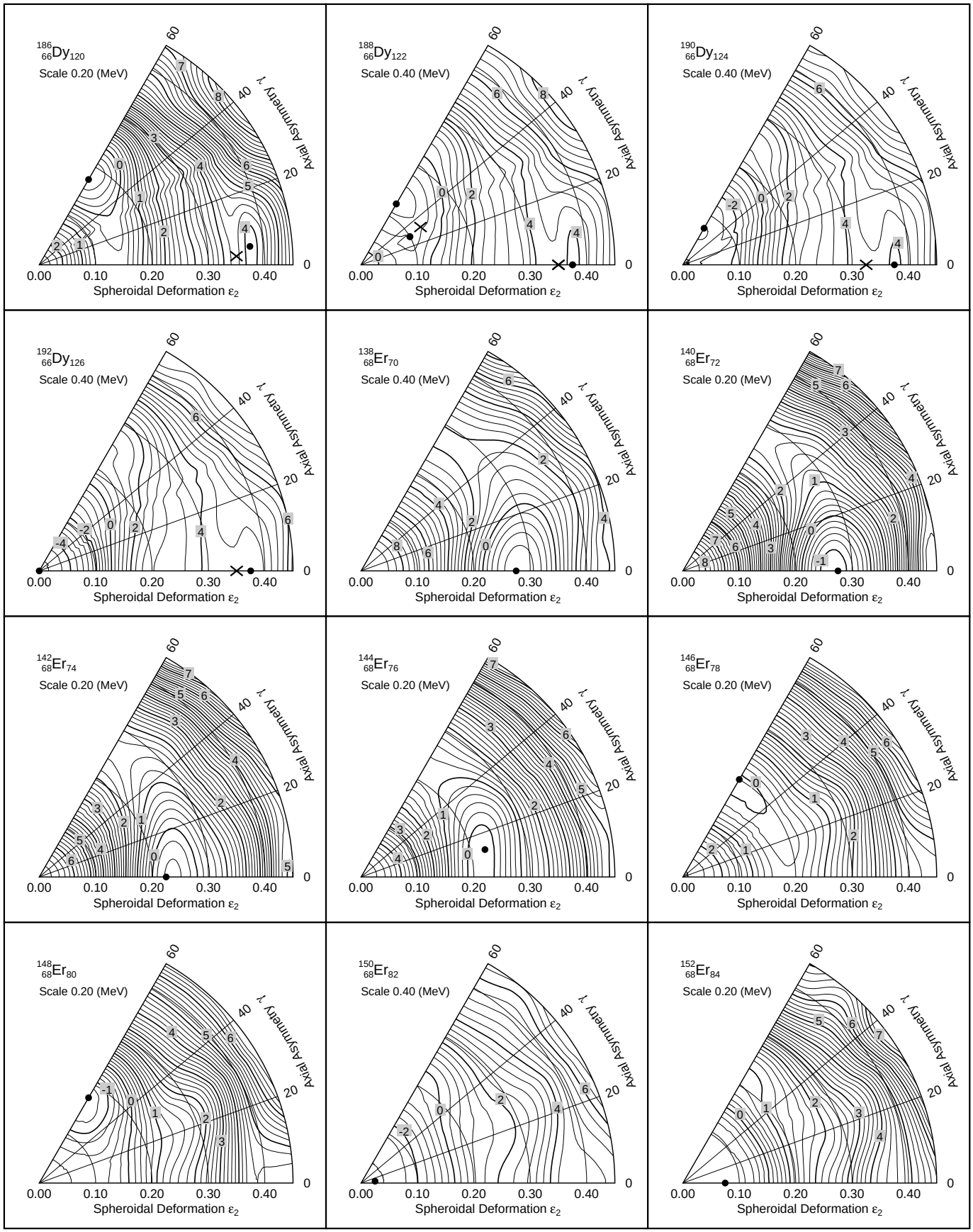
Graph 55


$^{138}_{66}Dy_{72}$ Scale 0.20 (MeV)
$^{140}_{66}Dy_{74}$ Scale 0.20 (MeV)
$^{142}_{66}Dy_{76}$ Scale 0.20 (MeV)
$^{144}_{66}Dy_{78}$ Scale 0.20 (MeV)
$^{146}_{66}Dy_{80}$ Scale 0.20 (MeV)
$^{148}_{66}Dy_{82}$ Scale 0.40 (MeV)
$^{150}_{66}Dy_{84}$ Scale 0.20 (MeV)
$^{152}_{66}Dy_{86}$ Scale 0.20 (MeV)
$^{154}_{66}Dy_{88}$ Scale 0.20 (MeV)
$^{156}_{66}Dy_{90}$ Scale 0.20 (MeV)
$^{158}_{66}Dy_{92}$ Scale 0.20 (MeV)
$^{160}_{66}Dy_{94}$ Scale 0.20 (MeV)
Axial Asymmetry γ
60
40
20
0
0.00 0.10 0.20 0.30 0.40
Spheroidal Deformation ε_2

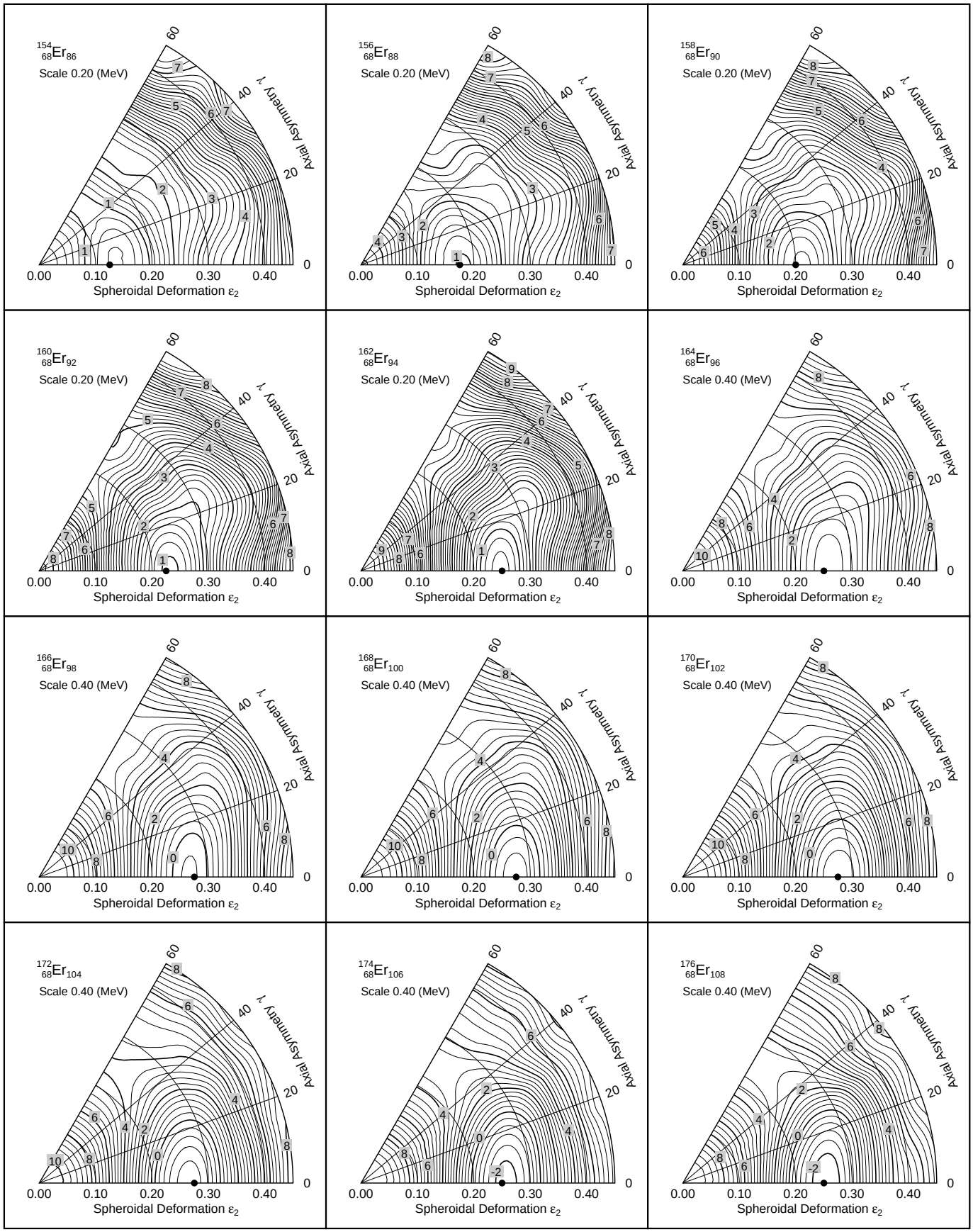
Graph 56


$^{162}_{66}Dy_{96}$ Scale 0.40 (MeV)
$^{164}_{66}Dy_{98}$ Scale 0.40 (MeV)
$^{166}_{66}Dy_{100}$ Scale 0.40 (MeV)
$^{168}_{66}Dy_{102}$ Scale 0.40 (MeV)
$^{170}_{66}Dy_{104}$ Scale 0.40 (MeV)
$^{172}_{66}Dy_{106}$ Scale 0.40 (MeV)
$^{174}_{66}Dy_{108}$ Scale 0.40 (MeV)
$^{176}_{66}Dy_{110}$ Scale 0.40 (MeV)
$^{178}_{66}Dy_{112}$ Scale 0.20 (MeV)
$^{180}_{66}Dy_{114}$ Scale 0.20 (MeV)
$^{182}_{66}Dy_{116}$ Scale 0.20 (MeV)
$^{184}_{66}Dy_{118}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

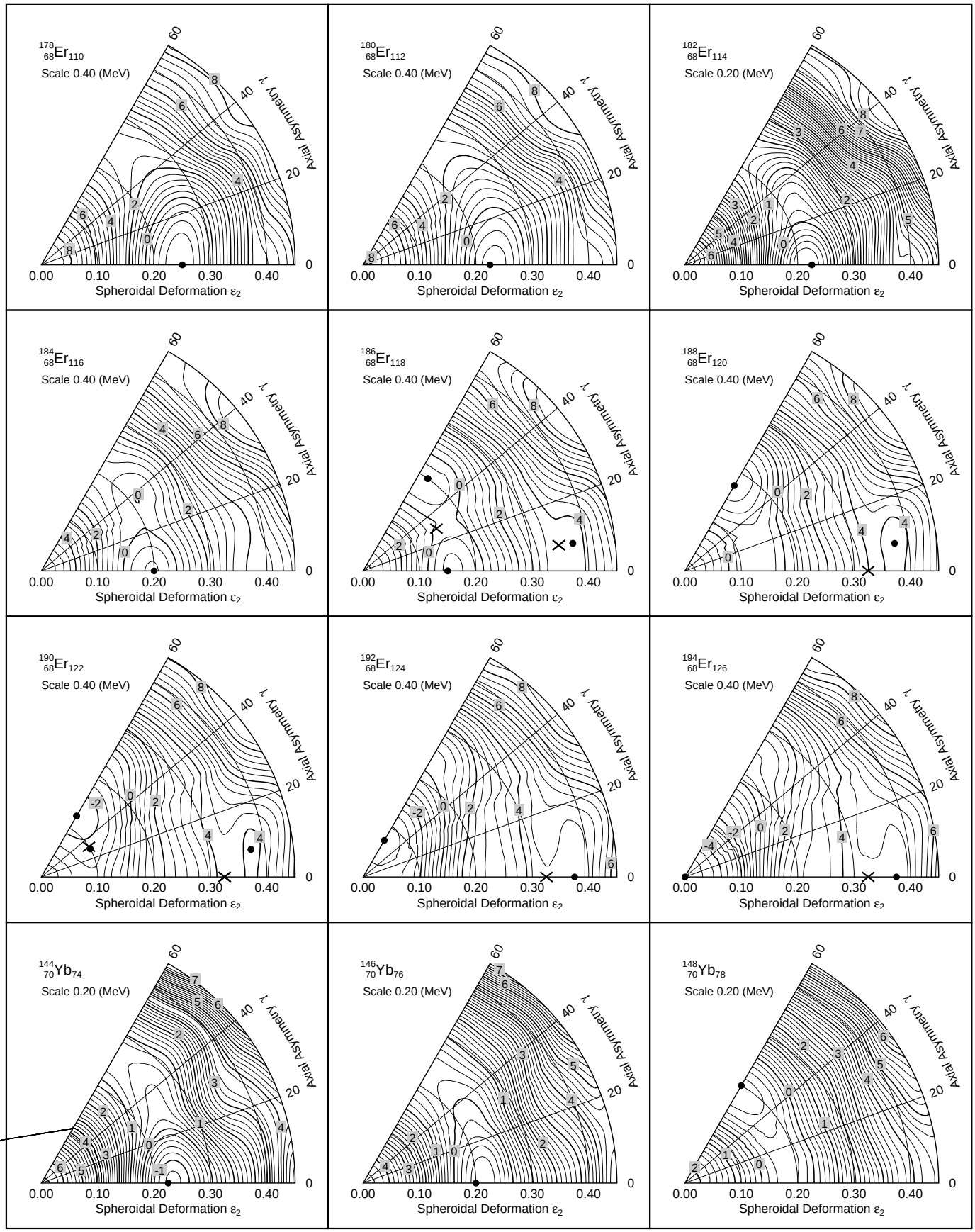
Graph 57


$^{186}_{66}Dy_{120}$ Scale 0.20 (MeV)
$^{188}_{66}Dy_{122}$ Scale 0.40 (MeV)
$^{190}_{66}Dy_{124}$ Scale 0.40 (MeV)
$^{192}_{66}Dy_{126}$ Scale 0.40 (MeV)
$^{138}_{68}Er_{70}$ Scale 0.40 (MeV)
$^{140}_{68}Er_{72}$ Scale 0.20 (MeV)
$^{142}_{68}Er_{74}$ Scale 0.20 (MeV)
$^{144}_{68}Er_{76}$ Scale 0.20 (MeV)
$^{146}_{68}Er_{78}$ Scale 0.20 (MeV)
$^{148}_{68}Er_{80}$ Scale 0.20 (MeV)
$^{150}_{68}Er_{82}$ Scale 0.40 (MeV)
$^{152}_{68}Er_{84}$ Scale 0.20 (MeV)
Axial Asymmetry γ
60
40
20
0
0.00 0.10 0.20 0.30 0.40
Spheroidal Deformation ε_2

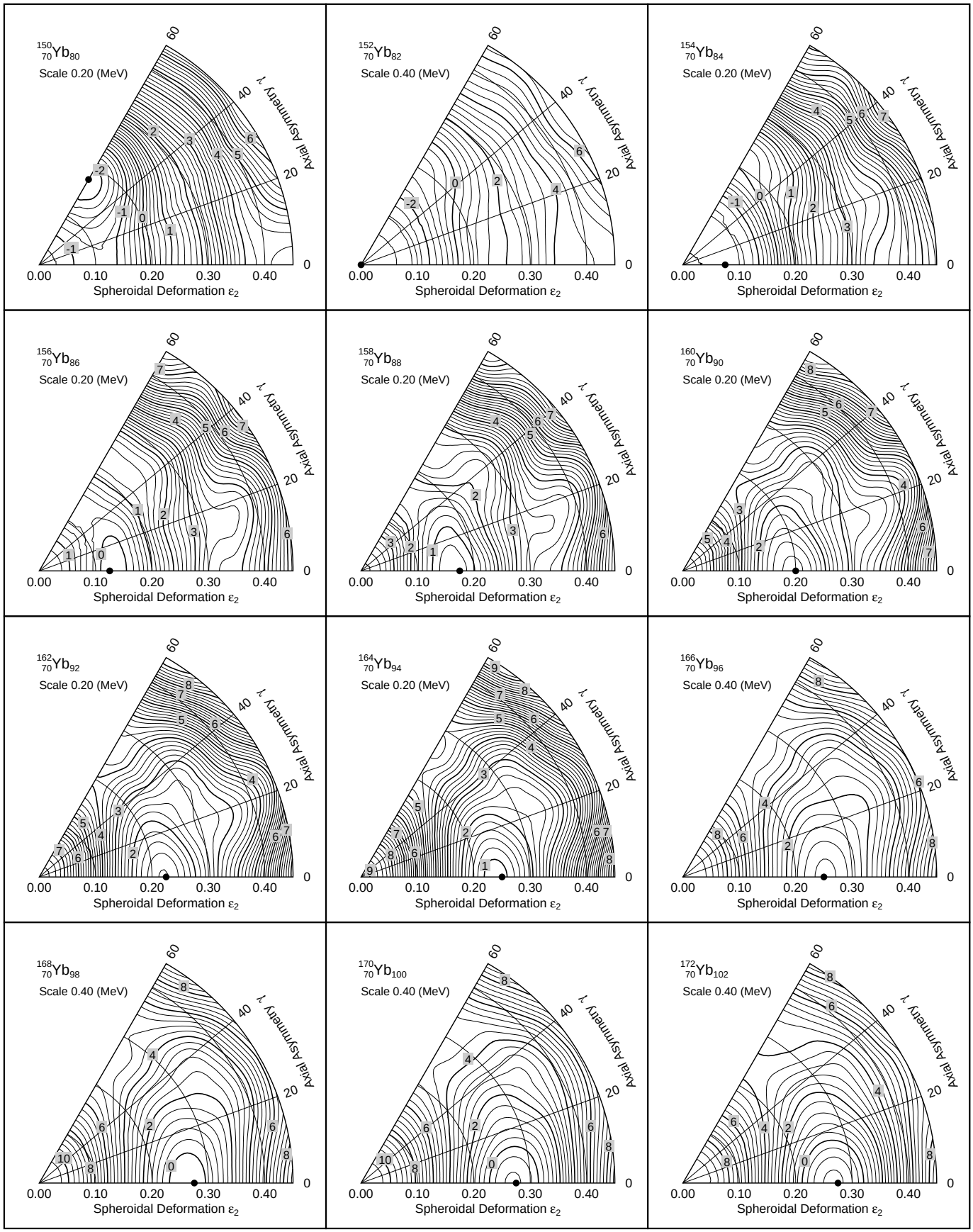
Graph 58


$^{154}_{68}Er_{86}$ Scale 0.20 (MeV)
$^{156}_{68}Er_{88}$ Scale 0.20 (MeV)
$^{158}_{68}Er_{90}$ Scale 0.20 (MeV)
$^{160}_{68}Er_{92}$ Scale 0.20 (MeV)
$^{162}_{68}Er_{94}$ Scale 0.20 (MeV)
$^{164}_{68}Er_{96}$ Scale 0.40 (MeV)
$^{166}_{68}Er_{98}$ Scale 0.40 (MeV)
$^{168}_{68}Er_{100}$ Scale 0.40 (MeV)
$^{170}_{68}Er_{102}$ Scale 0.40 (MeV)
$^{172}_{68}Er_{104}$ Scale 0.40 (MeV)
$^{174}_{68}Er_{106}$ Scale 0.40 (MeV)
$^{176}_{68}Er_{108}$ Scale 0.40 (MeV)
Axial Asymmetry γ
60
40
20
0
0.00 0.10 0.20 0.30 0.40
Spheroidal Deformation ε_2

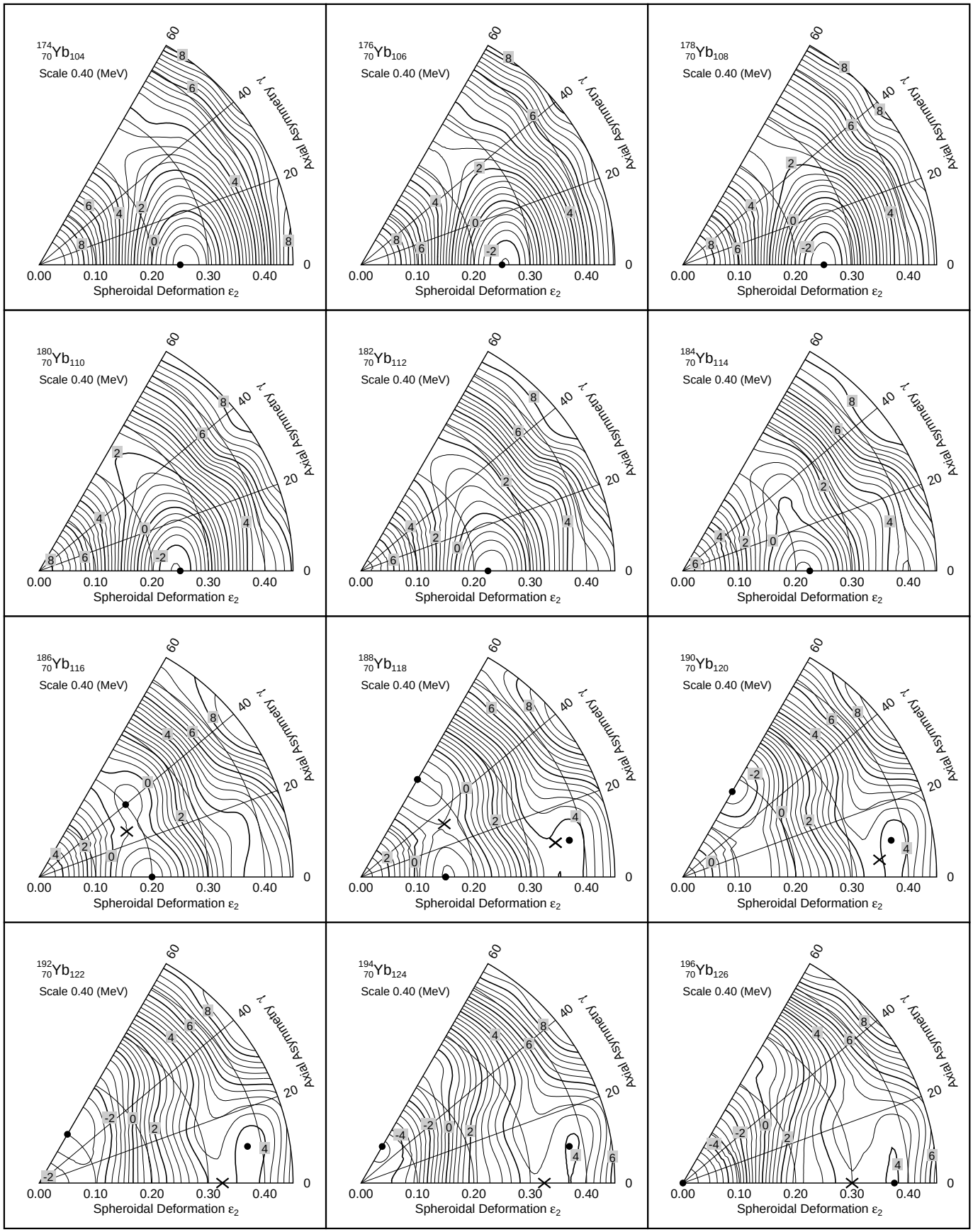
Graph 59


$^{178}_{68}Er_{110}$ Scale 0.40 (MeV)
$^{180}_{68}Er_{112}$ Scale 0.40 (MeV)
$^{182}_{68}Er_{114}$ Scale 0.20 (MeV)
$^{184}_{68}Er_{116}$ Scale 0.40 (MeV)
$^{186}_{68}Er_{118}$ Scale 0.40 (MeV)
$^{188}_{68}Er_{120}$ Scale 0.40 (MeV)
$^{190}_{68}Er_{122}$ Scale 0.40 (MeV)
$^{192}_{68}Er_{124}$ Scale 0.40 (MeV)
$^{194}_{68}Er_{126}$ Scale 0.40 (MeV)
$^{144}_{70}Yb_{74}$ Scale 0.20 (MeV)
$^{146}_{70}Yb_{76}$ Scale 0.20 (MeV)
$^{148}_{70}Yb_{78}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

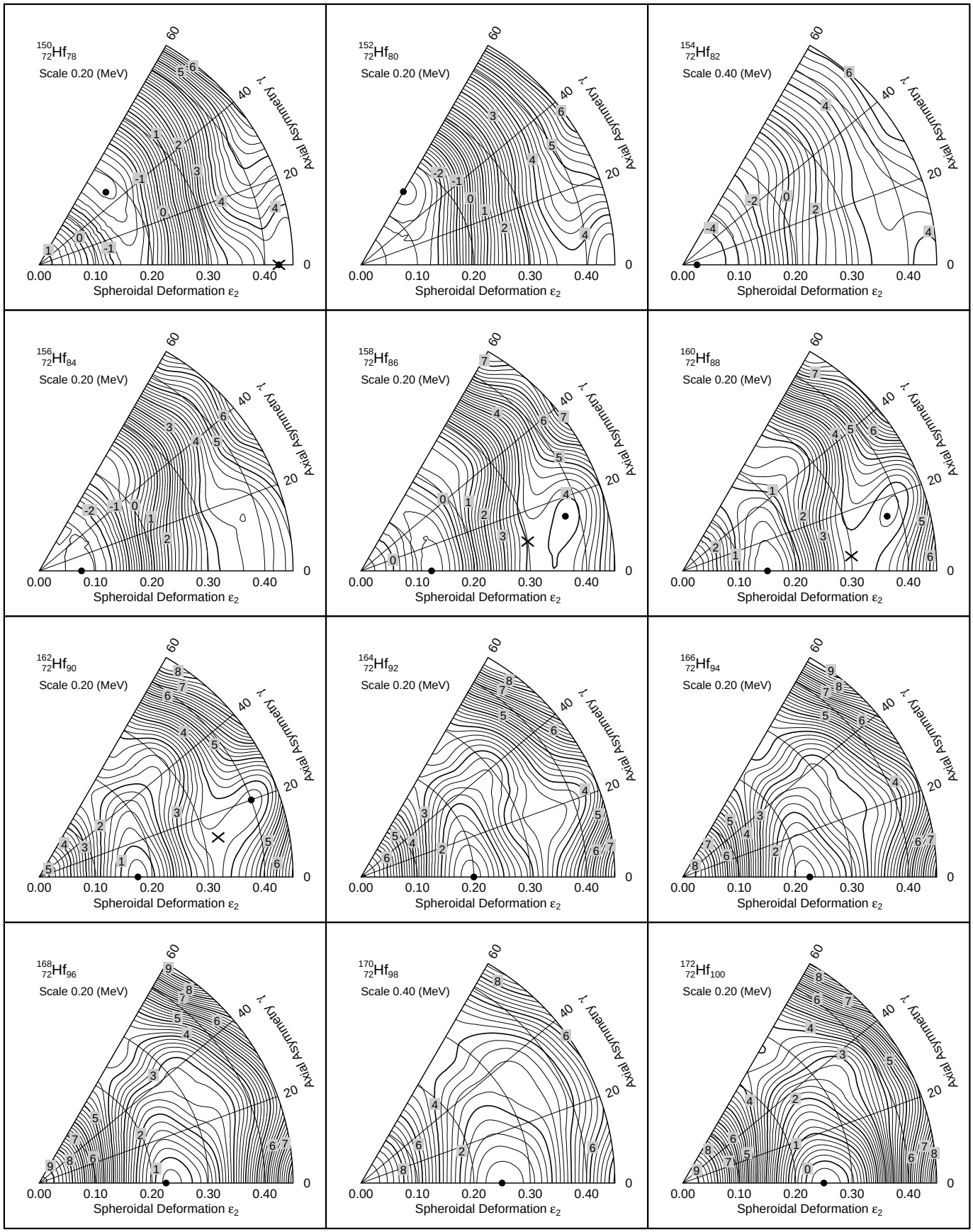
Graph 60


$^{150}_{70}Yb_{80}$ Scale 0.20 (MeV)
$^{152}_{70}Yb_{82}$ Scale 0.40 (MeV)
$^{154}_{70}Yb_{84}$ Scale 0.20 (MeV)
$^{156}_{70}Yb_{86}$ Scale 0.20 (MeV)
$^{158}_{70}Yb_{88}$ Scale 0.20 (MeV)
$^{160}_{70}Yb_{90}$ Scale 0.20 (MeV)
$^{162}_{70}Yb_{92}$ Scale 0.20 (MeV)
$^{164}_{70}Yb_{94}$ Scale 0.20 (MeV)
$^{166}_{70}Yb_{96}$ Scale 0.40 (MeV)
$^{168}_{70}Yb_{98}$ Scale 0.40 (MeV)
$^{170}_{70}Yb_{100}$ Scale 0.40 (MeV)
$^{172}_{70}Yb_{102}$ Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

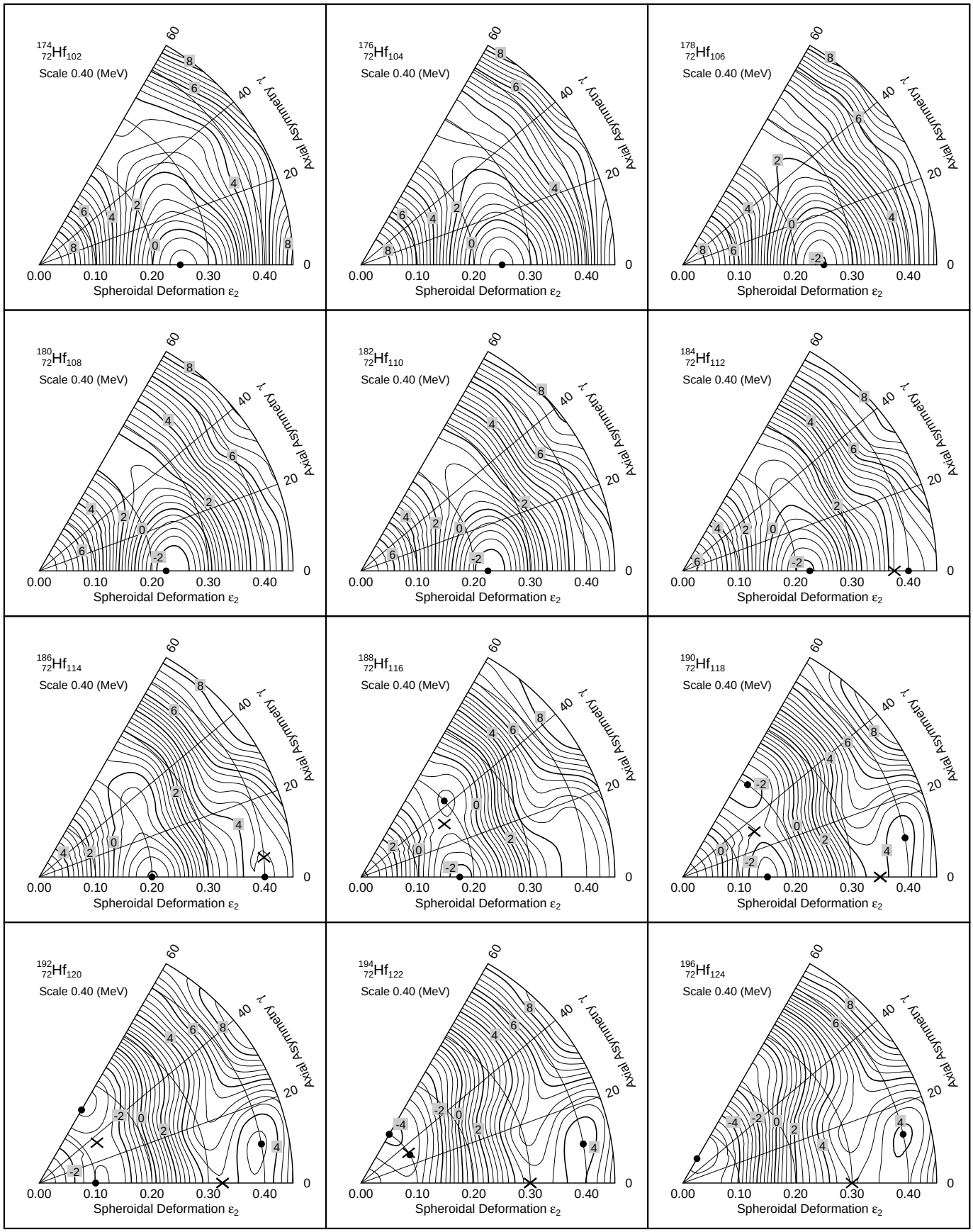
Graph 61


$^{174}_{70}Yb_{104}$
$^{176}_{70}Yb_{106}$
$^{178}_{70}Yb_{108}$
$^{180}_{70}Yb_{110}$
$^{182}_{70}Yb_{112}$
$^{184}_{70}Yb_{114}$
$^{186}_{70}Yb_{116}$
$^{188}_{70}Yb_{118}$
$^{190}_{70}Yb_{120}$
$^{192}_{70}Yb_{122}$
$^{194}_{70}Yb_{124}$
$^{196}_{70}Yb_{126}$
Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

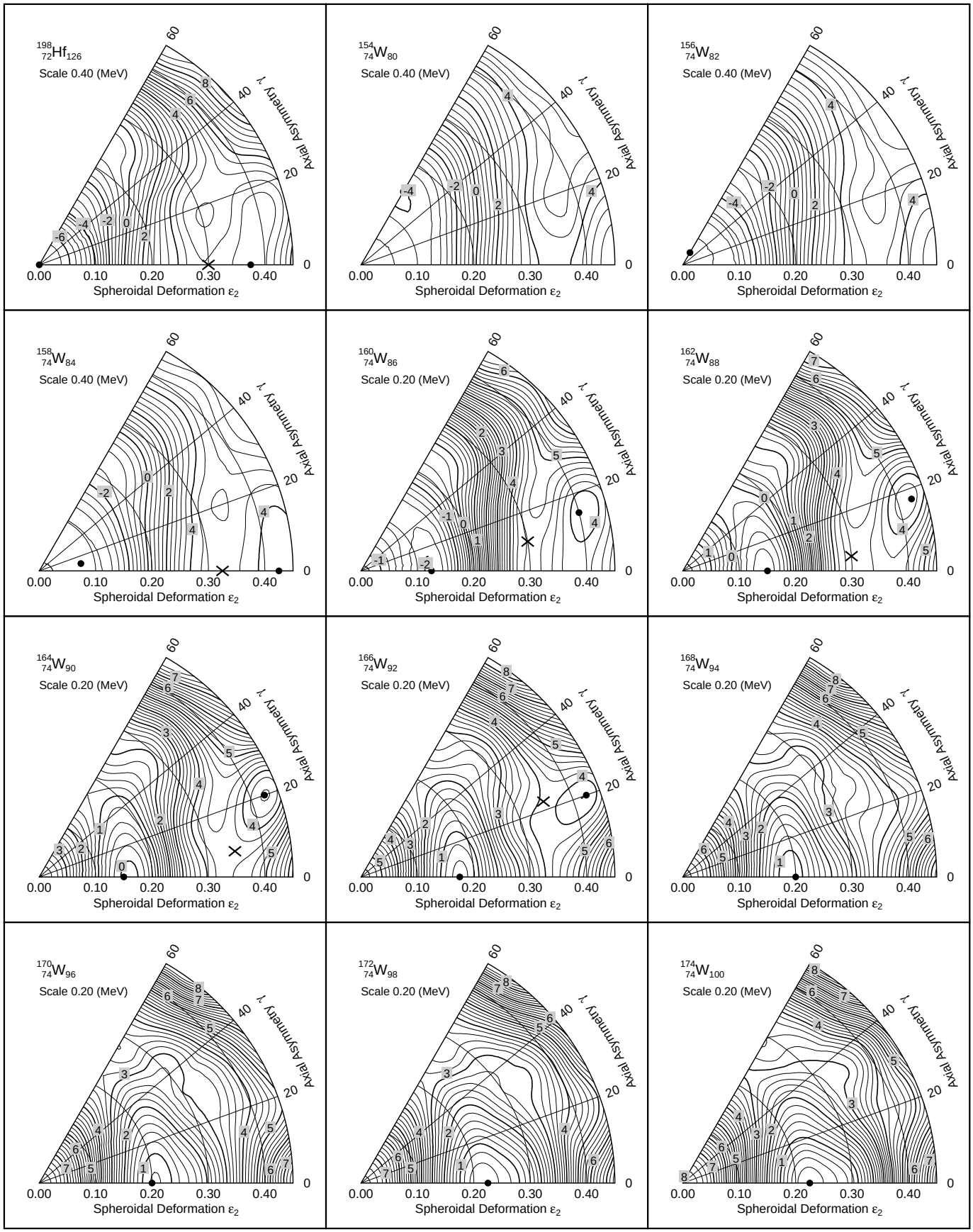
Graph 62


$^{150}_{72}Hf_{78}$ Scale 0.20 (MeV)
$^{152}_{72}Hf_{80}$ Scale 0.20 (MeV)
$^{154}_{72}Hf_{82}$ Scale 0.40 (MeV)
$^{156}_{72}Hf_{84}$ Scale 0.20 (MeV)
$^{158}_{72}Hf_{86}$ Scale 0.20 (MeV)
$^{160}_{72}Hf_{88}$ Scale 0.20 (MeV)
$^{162}_{72}Hf_{90}$ Scale 0.20 (MeV)
$^{164}_{72}Hf_{92}$ Scale 0.20 (MeV)
$^{166}_{72}Hf_{94}$ Scale 0.20 (MeV)
$^{168}_{72}Hf_{96}$ Scale 0.20 (MeV)
$^{170}_{72}Hf_{98}$ Scale 0.40 (MeV)
$^{172}_{72}Hf_{100}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

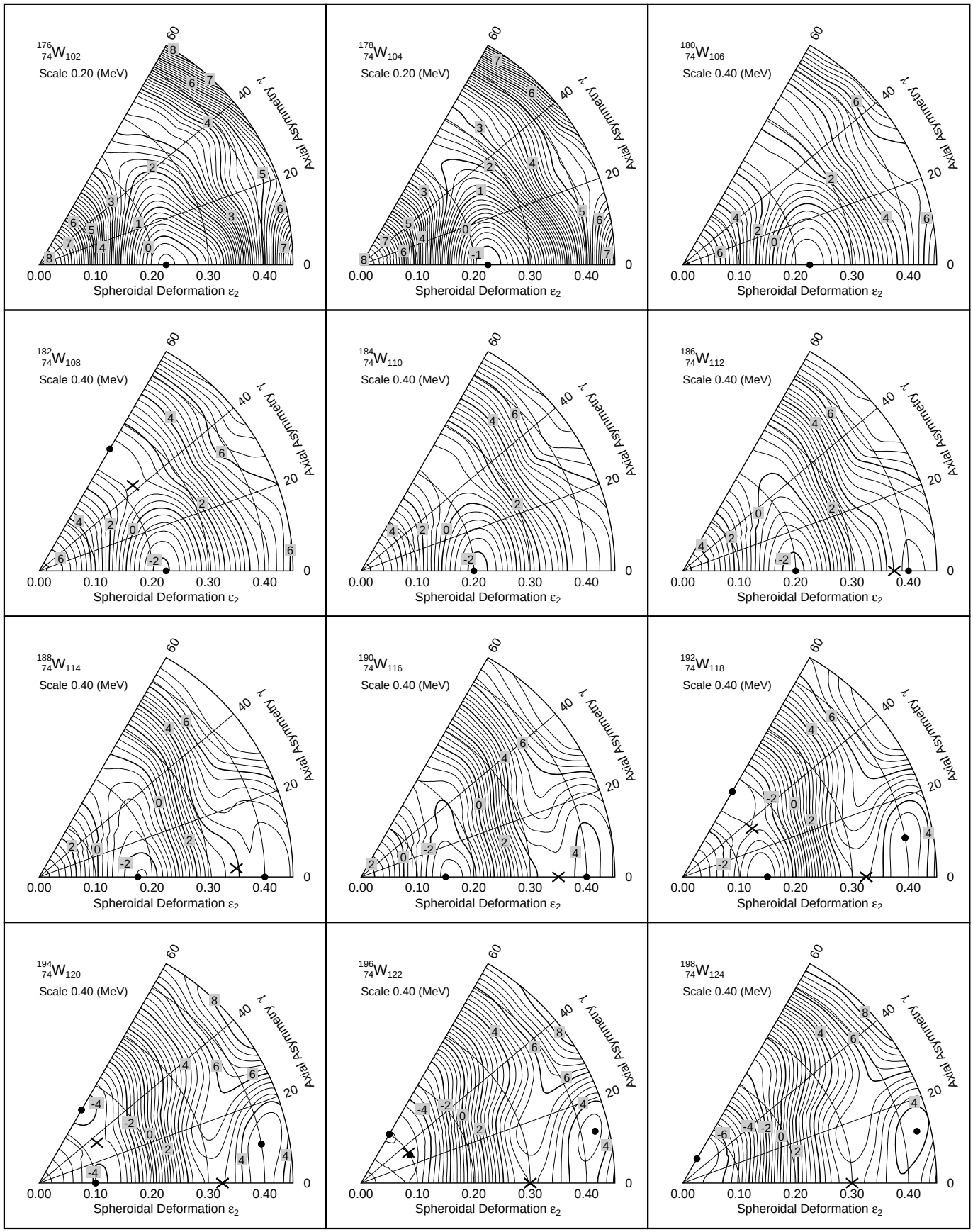
Graph 63


$^{174}_{72}Hf_{102}$
$^{176}_{72}Hf_{104}$
$^{178}_{72}Hf_{106}$
$^{180}_{72}Hf_{108}$
$^{182}_{72}Hf_{110}$
$^{184}_{72}Hf_{112}$
$^{186}_{72}Hf_{114}$
$^{188}_{72}Hf_{116}$
$^{190}_{72}Hf_{118}$
$^{192}_{72}Hf_{120}$
$^{194}_{72}Hf_{122}$
$^{196}_{72}Hf_{124}$
Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

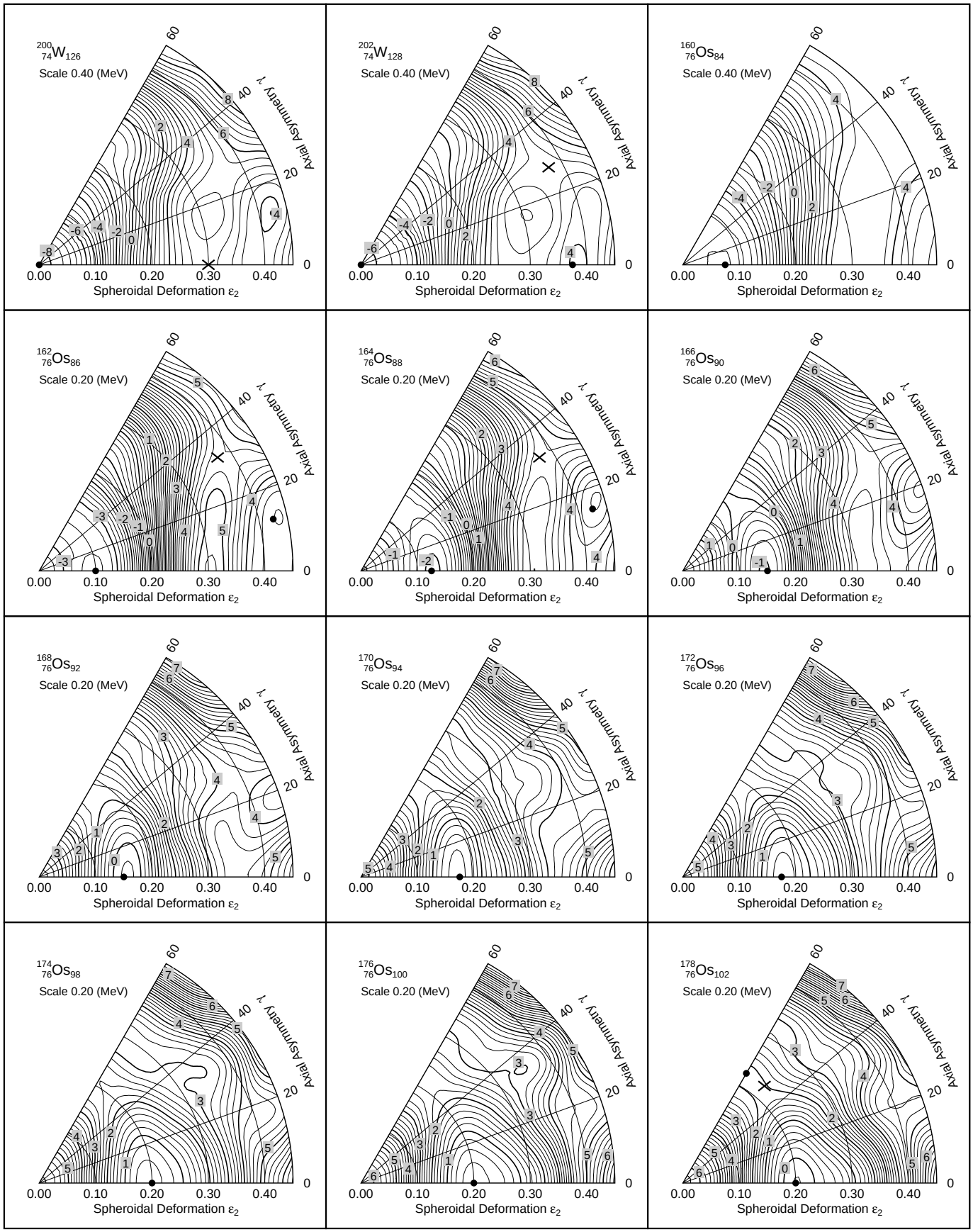
Graph 64


$^{198}_{72}Hf_{126}$ Scale 0.40 (MeV)
$^{154}_{74}W_{80}$ Scale 0.40 (MeV)
$^{156}_{74}W_{82}$ Scale 0.40 (MeV)
$^{158}_{74}W_{84}$ Scale 0.40 (MeV)
$^{160}_{74}W_{86}$ Scale 0.20 (MeV)
$^{162}_{74}W_{88}$ Scale 0.20 (MeV)
$^{164}_{74}W_{90}$ Scale 0.20 (MeV)
$^{166}_{74}W_{92}$ Scale 0.20 (MeV)
$^{168}_{74}W_{94}$ Scale 0.20 (MeV)
$^{170}_{74}W_{96}$ Scale 0.20 (MeV)
$^{172}_{74}W_{98}$ Scale 0.20 (MeV)
$^{174}_{74}W_{100}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

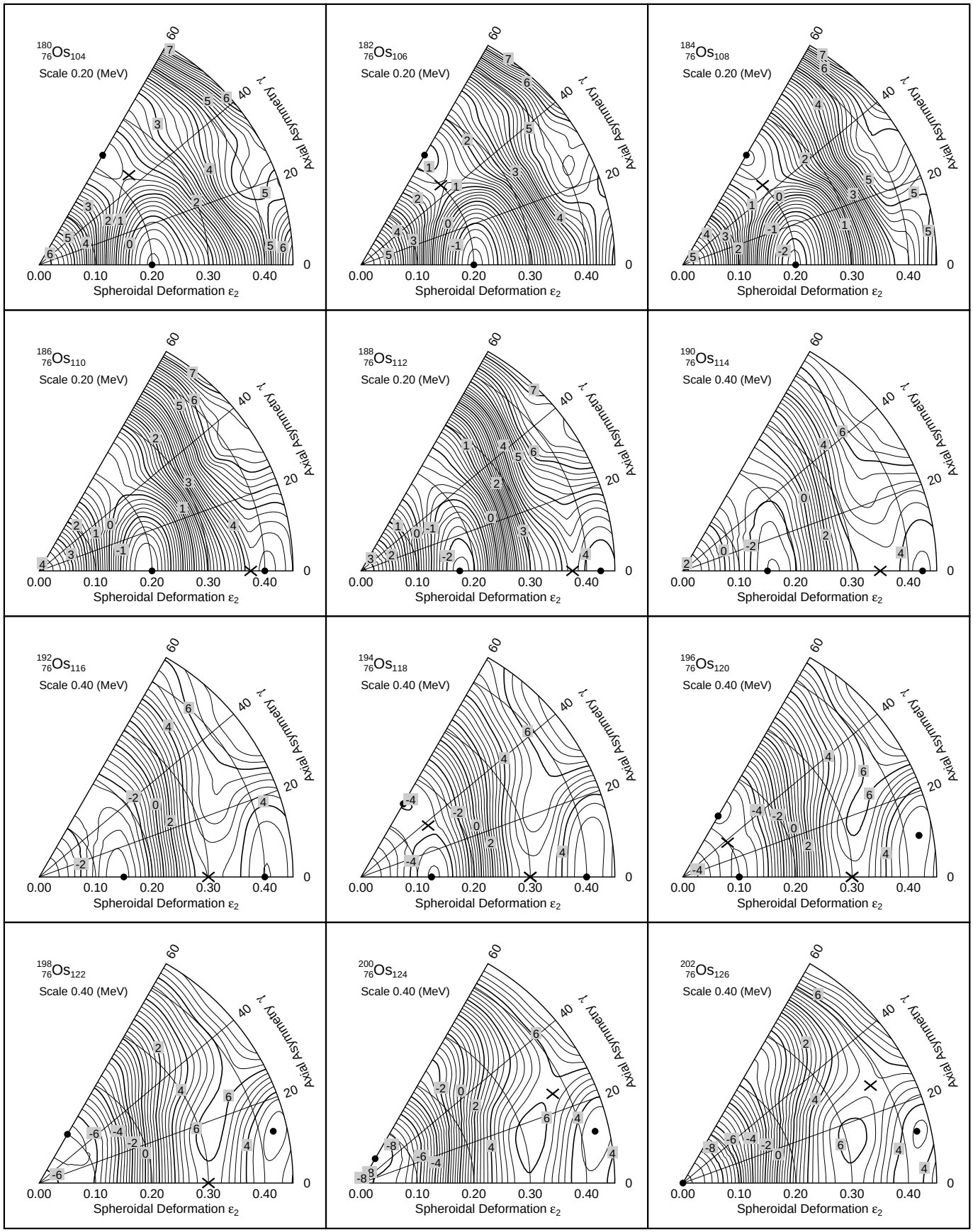
Graph 65


$^{176}_{74}W_{102}$ Scale 0.20 (MeV)
$^{178}_{74}W_{104}$ Scale 0.20 (MeV)
$^{180}_{74}W_{106}$ Scale 0.40 (MeV)
$^{182}_{74}W_{108}$ Scale 0.40 (MeV)
$^{184}_{74}W_{110}$ Scale 0.40 (MeV)
$^{186}_{74}W_{112}$ Scale 0.40 (MeV)
$^{188}_{74}W_{114}$ Scale 0.40 (MeV)
$^{190}_{74}W_{116}$ Scale 0.40 (MeV)
$^{192}_{74}W_{118}$ Scale 0.40 (MeV)
$^{194}_{74}W_{120}$ Scale 0.40 (MeV)
$^{196}_{74}W_{122}$ Scale 0.40 (MeV)
$^{198}_{74}W_{124}$ Scale 0.40 (MeV)
Axial Asymmetry γ
60
40
20
0
0.00 0.10 0.20 0.30 0.40
Spheroidal Deformation ε_2

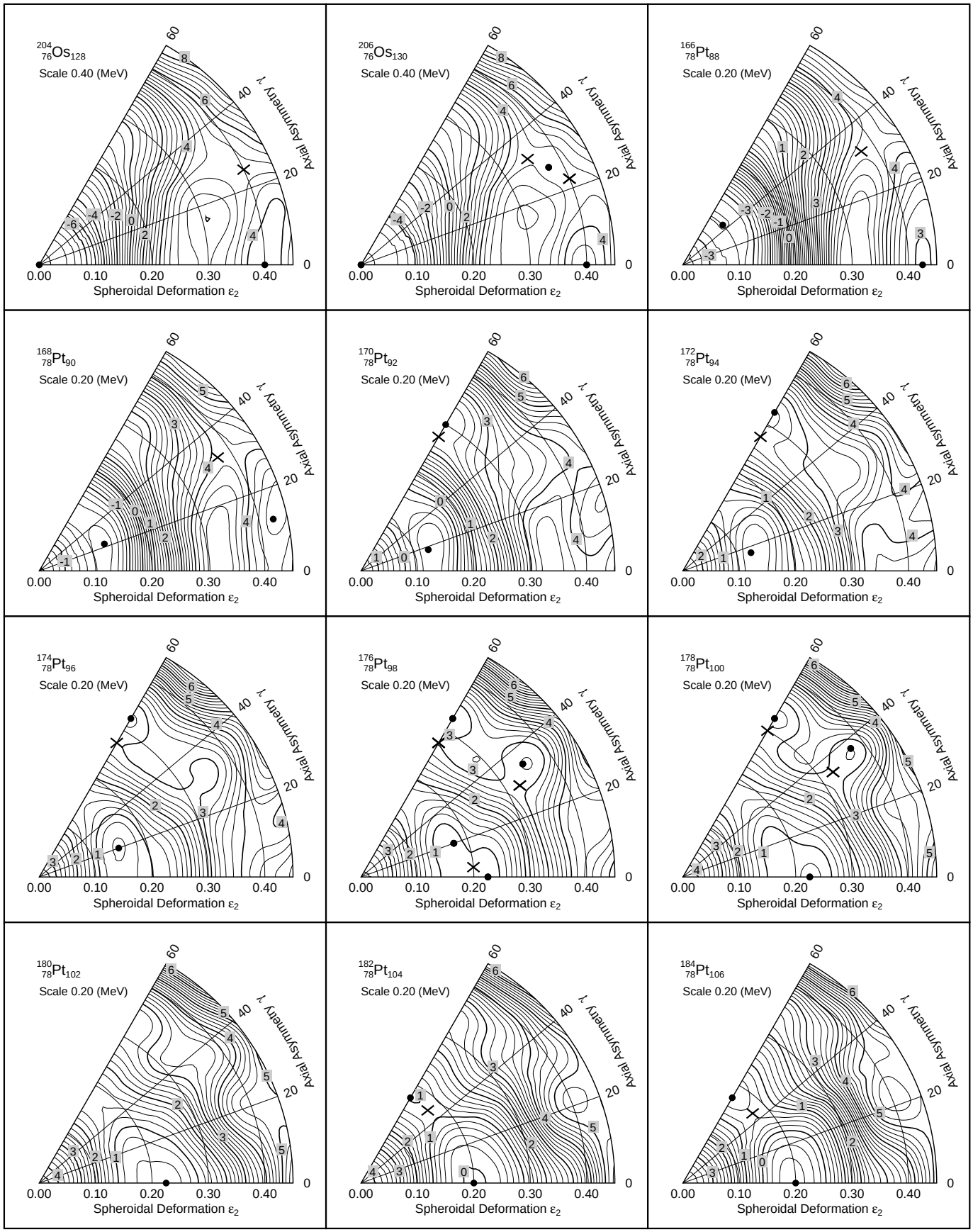
Graph 66


$^{200}_{74}W_{126}$ Scale 0.40 (MeV)
$^{202}_{74}W_{128}$ Scale 0.40 (MeV)
$^{160}_{76}Os_{84}$ Scale 0.40 (MeV)
$^{162}_{76}Os_{86}$ Scale 0.20 (MeV)
$^{164}_{76}Os_{88}$ Scale 0.20 (MeV)
$^{166}_{76}Os_{90}$ Scale 0.20 (MeV)
$^{168}_{76}Os_{92}$ Scale 0.20 (MeV)
$^{170}_{76}Os_{94}$ Scale 0.20 (MeV)
$^{172}_{76}Os_{96}$ Scale 0.20 (MeV)
$^{174}_{76}Os_{98}$ Scale 0.20 (MeV)
$^{176}_{76}Os_{100}$ Scale 0.20 (MeV)
$^{178}_{76}Os_{102}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

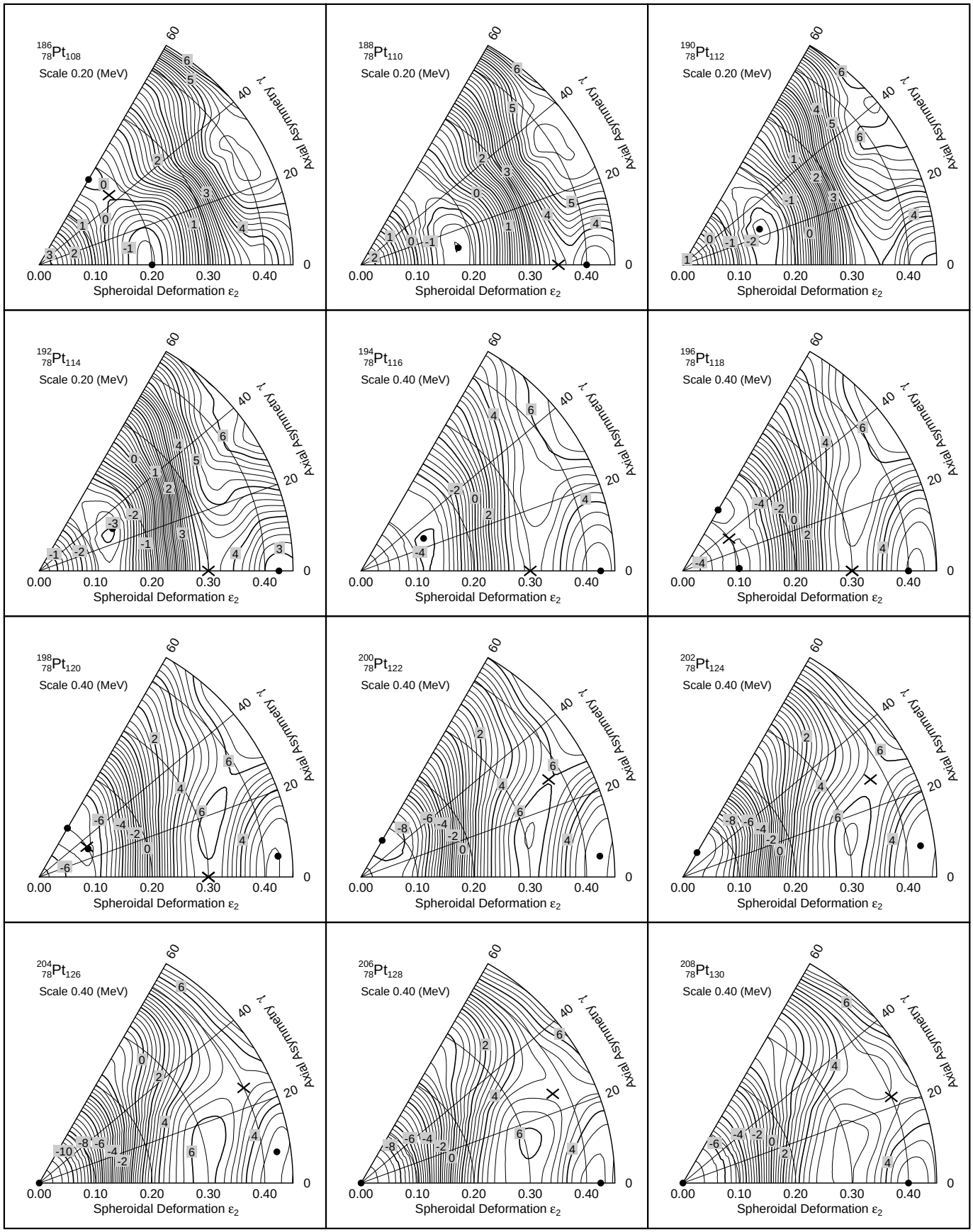
Graph 67


$^{180}_{76}Os_{104}$ Scale 0.20 (MeV)
$^{182}_{76}Os_{106}$ Scale 0.20 (MeV)
$^{184}_{76}Os_{108}$ Scale 0.20 (MeV)
$^{186}_{76}Os_{110}$ Scale 0.20 (MeV)
$^{188}_{76}Os_{112}$ Scale 0.20 (MeV)
$^{190}_{76}Os_{114}$ Scale 0.40 (MeV)
$^{192}_{76}Os_{116}$ Scale 0.40 (MeV)
$^{194}_{76}Os_{118}$ Scale 0.40 (MeV)
$^{196}_{76}Os_{120}$ Scale 0.40 (MeV)
$^{198}_{76}Os_{122}$ Scale 0.40 (MeV)
$^{200}_{76}Os_{124}$ Scale 0.40 (MeV)
$^{202}_{76}Os_{126}$ Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

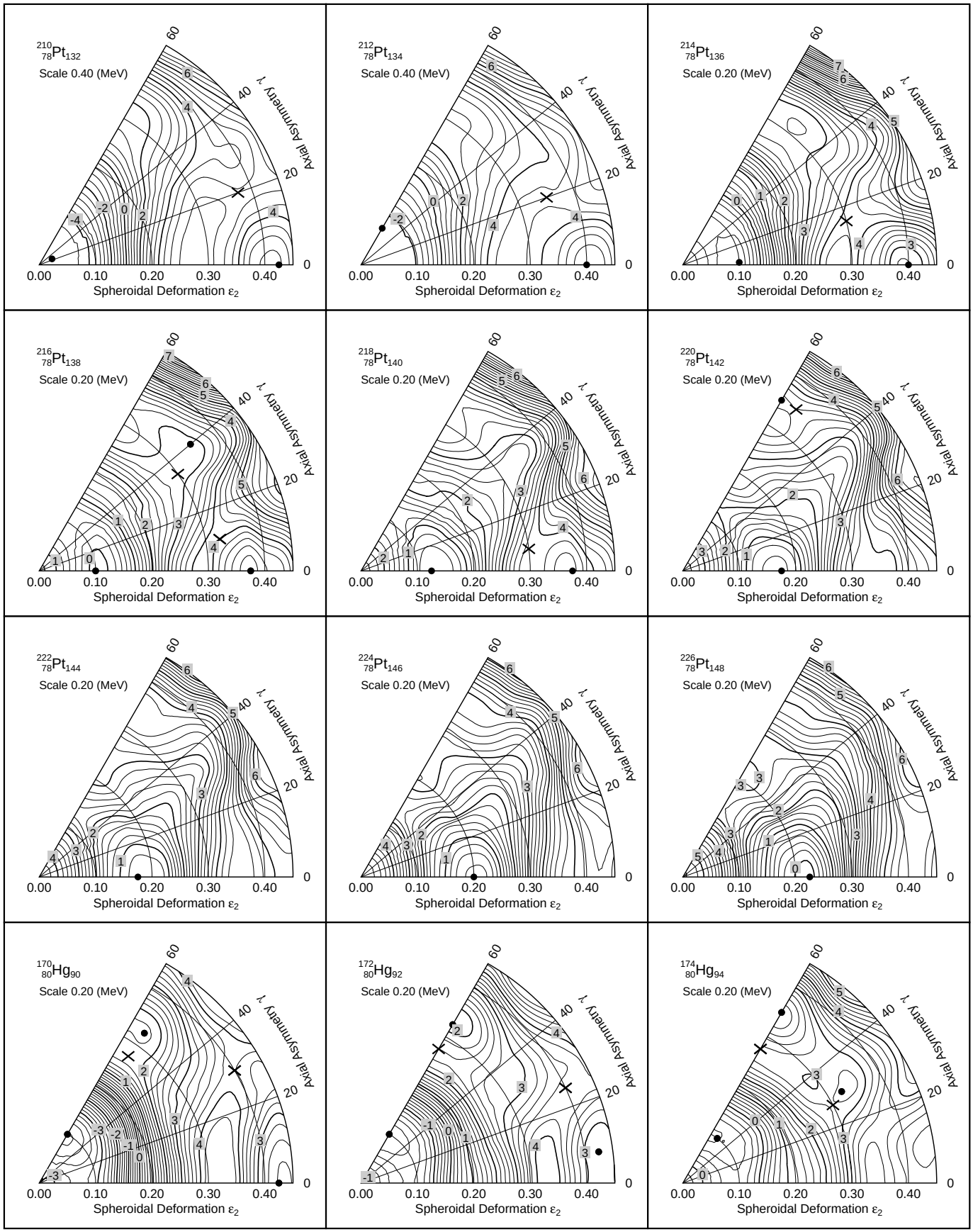
Graph 68


$^{204}_{76}Os_{128}$ Scale 0.40 (MeV)
$^{206}_{76}Os_{130}$ Scale 0.40 (MeV)
$^{166}_{78}Pt_{88}$ Scale 0.20 (MeV)
$^{168}_{78}Pt_{90}$ Scale 0.20 (MeV)
$^{170}_{78}Pt_{92}$ Scale 0.20 (MeV)
$^{172}_{78}Pt_{94}$ Scale 0.20 (MeV)
$^{174}_{78}Pt_{96}$ Scale 0.20 (MeV)
$^{176}_{78}Pt_{98}$ Scale 0.20 (MeV)
$^{178}_{78}Pt_{100}$ Scale 0.20 (MeV)
$^{180}_{78}Pt_{102}$ Scale 0.20 (MeV)
$^{182}_{78}Pt_{104}$ Scale 0.20 (MeV)
$^{184}_{78}Pt_{106}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

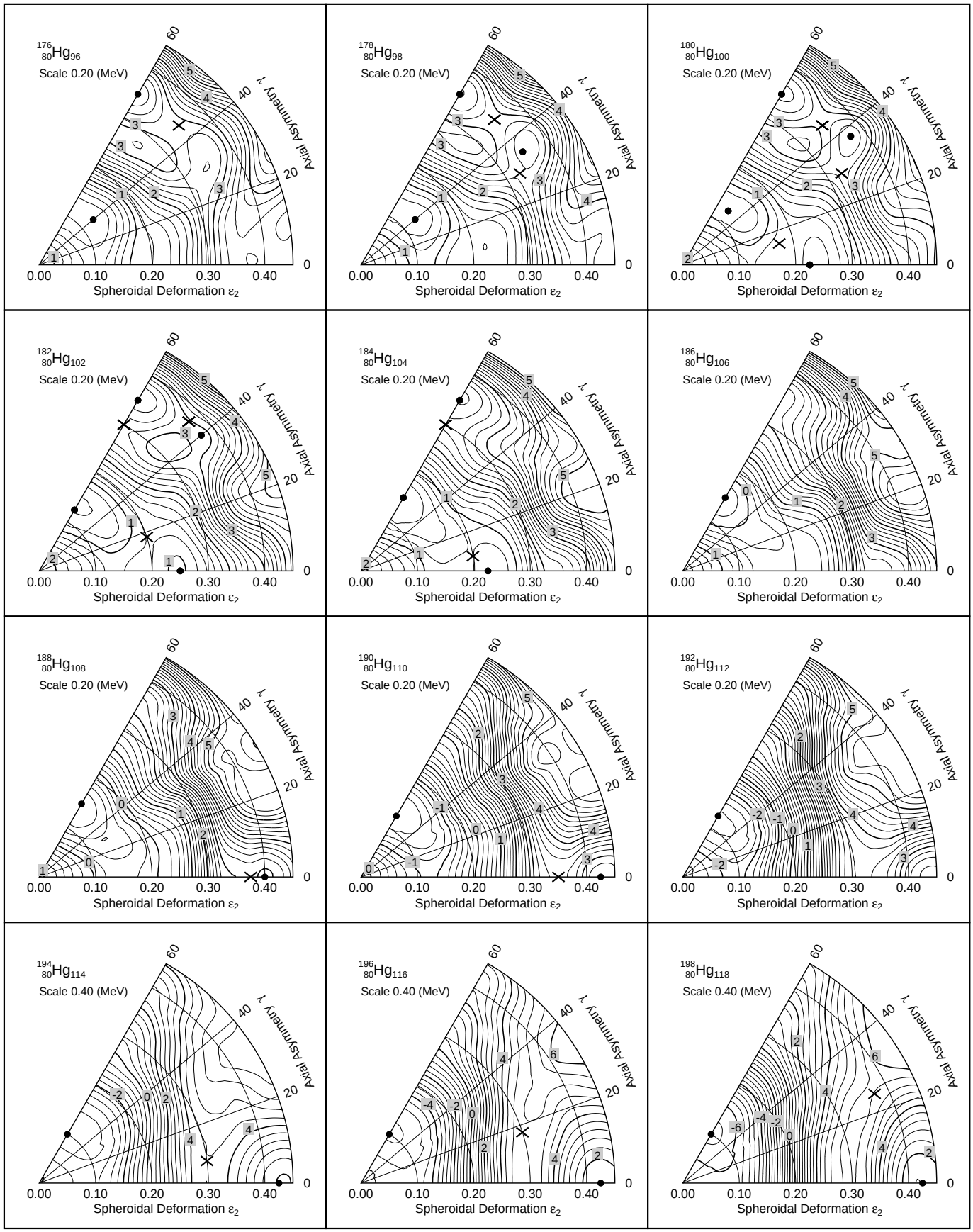
Graph 69


$^{186}_{78}Pt_{108}$ Scale 0.20 (MeV)
$^{188}_{78}Pt_{110}$ Scale 0.20 (MeV)
$^{190}_{78}Pt_{112}$ Scale 0.20 (MeV)
$^{192}_{78}Pt_{114}$ Scale 0.20 (MeV)
$^{194}_{78}Pt_{116}$ Scale 0.40 (MeV)
$^{196}_{78}Pt_{118}$ Scale 0.40 (MeV)
$^{198}_{78}Pt_{120}$ Scale 0.40 (MeV)
$^{200}_{78}Pt_{122}$ Scale 0.40 (MeV)
$^{202}_{78}Pt_{124}$ Scale 0.40 (MeV)
$^{204}_{78}Pt_{126}$ Scale 0.40 (MeV)
$^{206}_{78}Pt_{128}$ Scale 0.40 (MeV)
$^{208}_{78}Pt_{130}$ Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

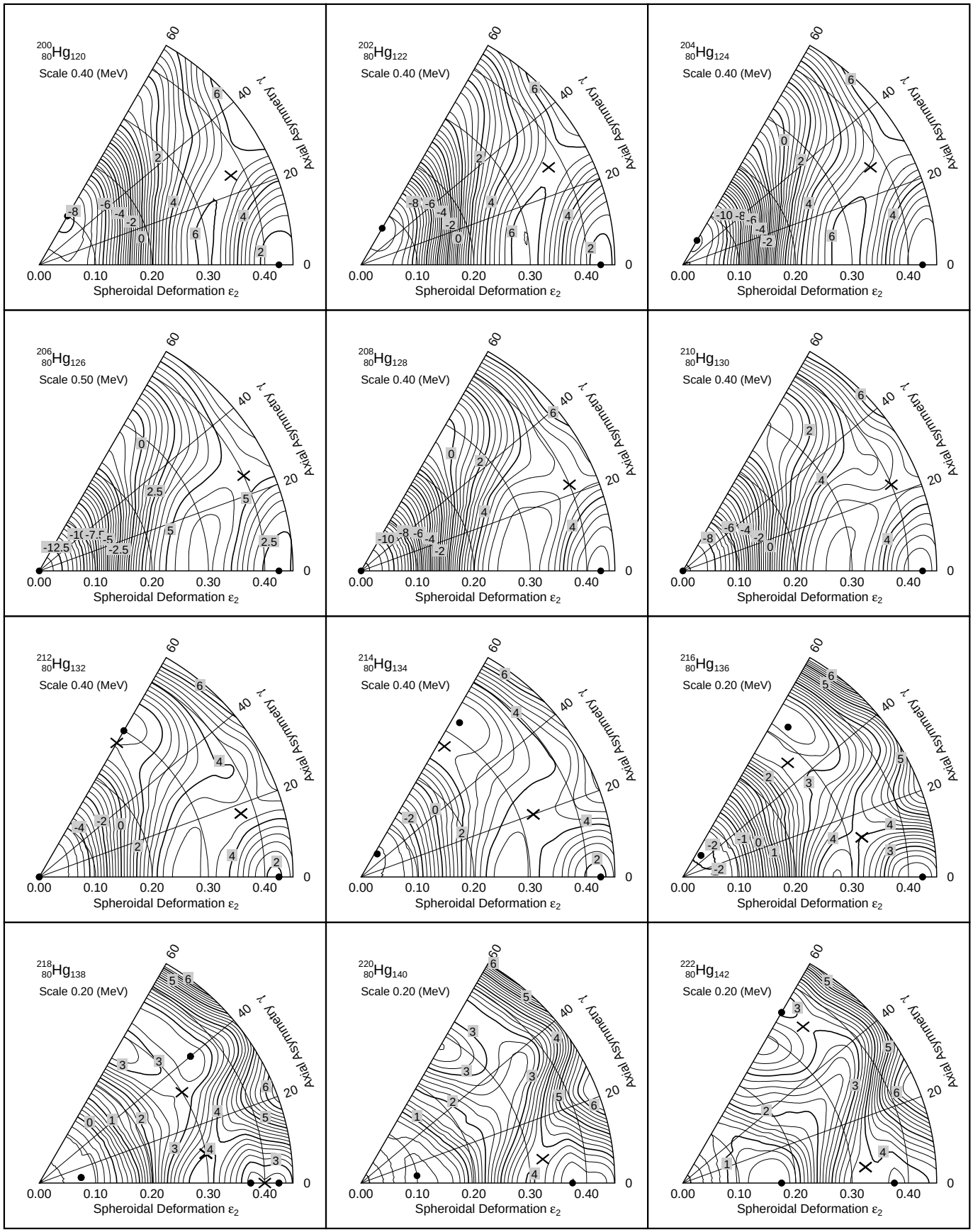
Graph 70


$^{210}_{78}Pt_{132}$ Scale 0.40 (MeV)
$^{212}_{78}Pt_{134}$ Scale 0.40 (MeV)
$^{214}_{78}Pt_{136}$ Scale 0.20 (MeV)
$^{216}_{78}Pt_{138}$ Scale 0.20 (MeV)
$^{218}_{78}Pt_{140}$ Scale 0.20 (MeV)
$^{220}_{78}Pt_{142}$ Scale 0.20 (MeV)
$^{222}_{78}Pt_{144}$ Scale 0.20 (MeV)
$^{224}_{78}Pt_{146}$ Scale 0.20 (MeV)
$^{226}_{78}Pt_{148}$ Scale 0.20 (MeV)
$^{170}_{80}Hg_{90}$ Scale 0.20 (MeV)
$^{172}_{80}Hg_{92}$ Scale 0.20 (MeV)
$^{174}_{80}Hg_{94}$ Scale 0.20 (MeV)
Axial Asymmetry γ
60
40
20
0
0.00 0.10 0.20 0.30 0.40
Spheroidal Deformation ε_2

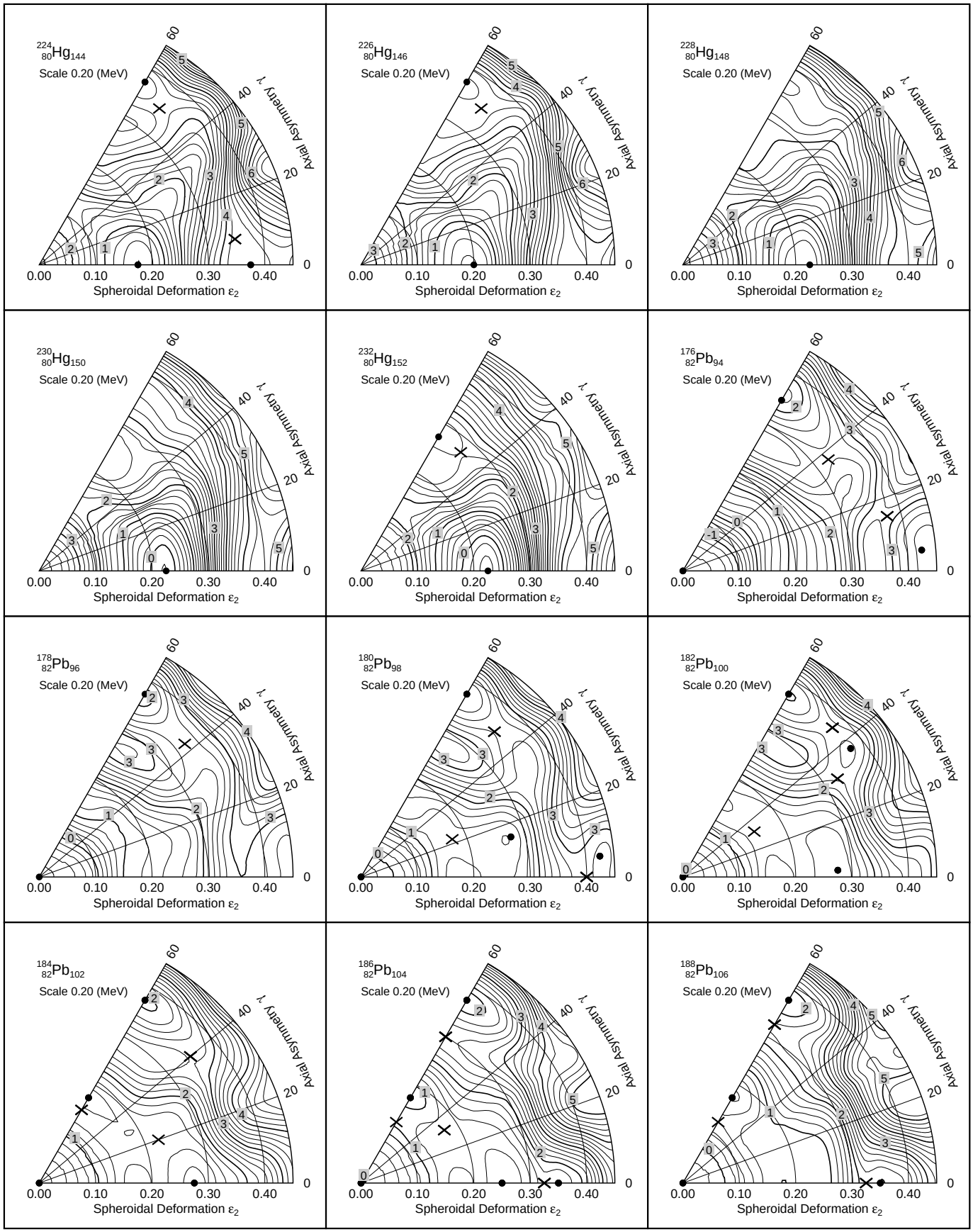
Graph 71


$^{176}_{80}Hg_{96}$
Scale 0.20 (MeV)
$^{178}_{80}Hg_{98}$
Scale 0.20 (MeV)
$^{180}_{80}Hg_{100}$
Scale 0.20 (MeV)
$^{182}_{80}Hg_{102}$
Scale 0.20 (MeV)
$^{184}_{80}Hg_{104}$
Scale 0.20 (MeV)
$^{186}_{80}Hg_{106}$
Scale 0.20 (MeV)
$^{188}_{80}Hg_{108}$
Scale 0.20 (MeV)
$^{190}_{80}Hg_{110}$
Scale 0.20 (MeV)
$^{192}_{80}Hg_{112}$
Scale 0.20 (MeV)
$^{194}_{80}Hg_{114}$
Scale 0.40 (MeV)
$^{196}_{80}Hg_{116}$
Scale 0.40 (MeV)
$^{198}_{80}Hg_{118}$
Scale 0.40 (MeV)
Axial Asymmetry γ
60
40
20
0
0.00 0.10 0.20 0.30 0.40
Spheroidal Deformation ε_2

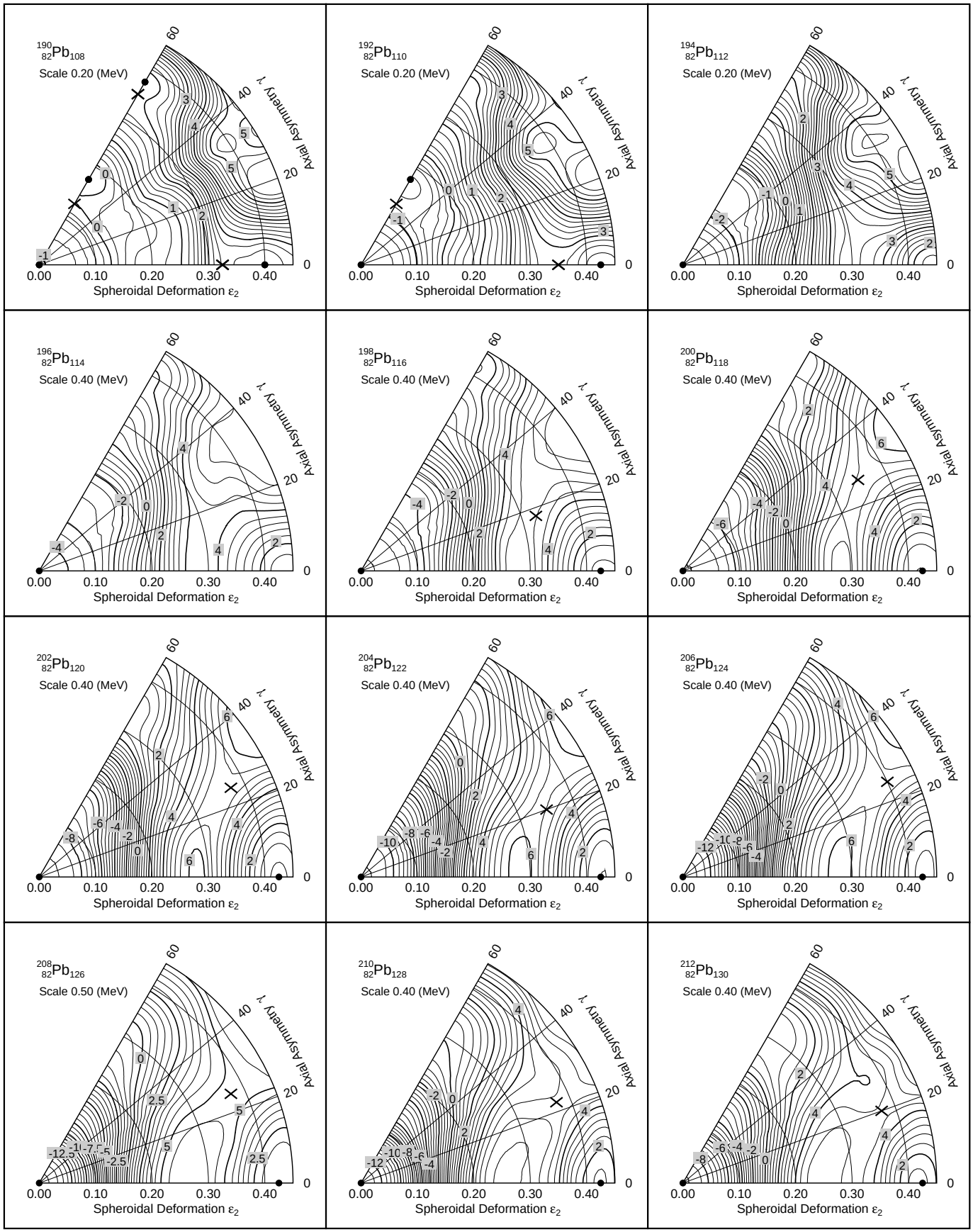
Graph 72


$^{200}_{80}Hg_{120}$ Scale 0.40 (MeV)
$^{202}_{80}Hg_{122}$ Scale 0.40 (MeV)
$^{204}_{80}Hg_{124}$ Scale 0.40 (MeV)
$^{206}_{80}Hg_{126}$ Scale 0.50 (MeV)
$^{208}_{80}Hg_{128}$ Scale 0.40 (MeV)
$^{210}_{80}Hg_{130}$ Scale 0.40 (MeV)
$^{212}_{80}Hg_{132}$ Scale 0.40 (MeV)
$^{214}_{80}Hg_{134}$ Scale 0.40 (MeV)
$^{216}_{80}Hg_{136}$ Scale 0.20 (MeV)
$^{218}_{80}Hg_{138}$ Scale 0.20 (MeV)
$^{220}_{80}Hg_{140}$ Scale 0.20 (MeV)
$^{222}_{80}Hg_{142}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

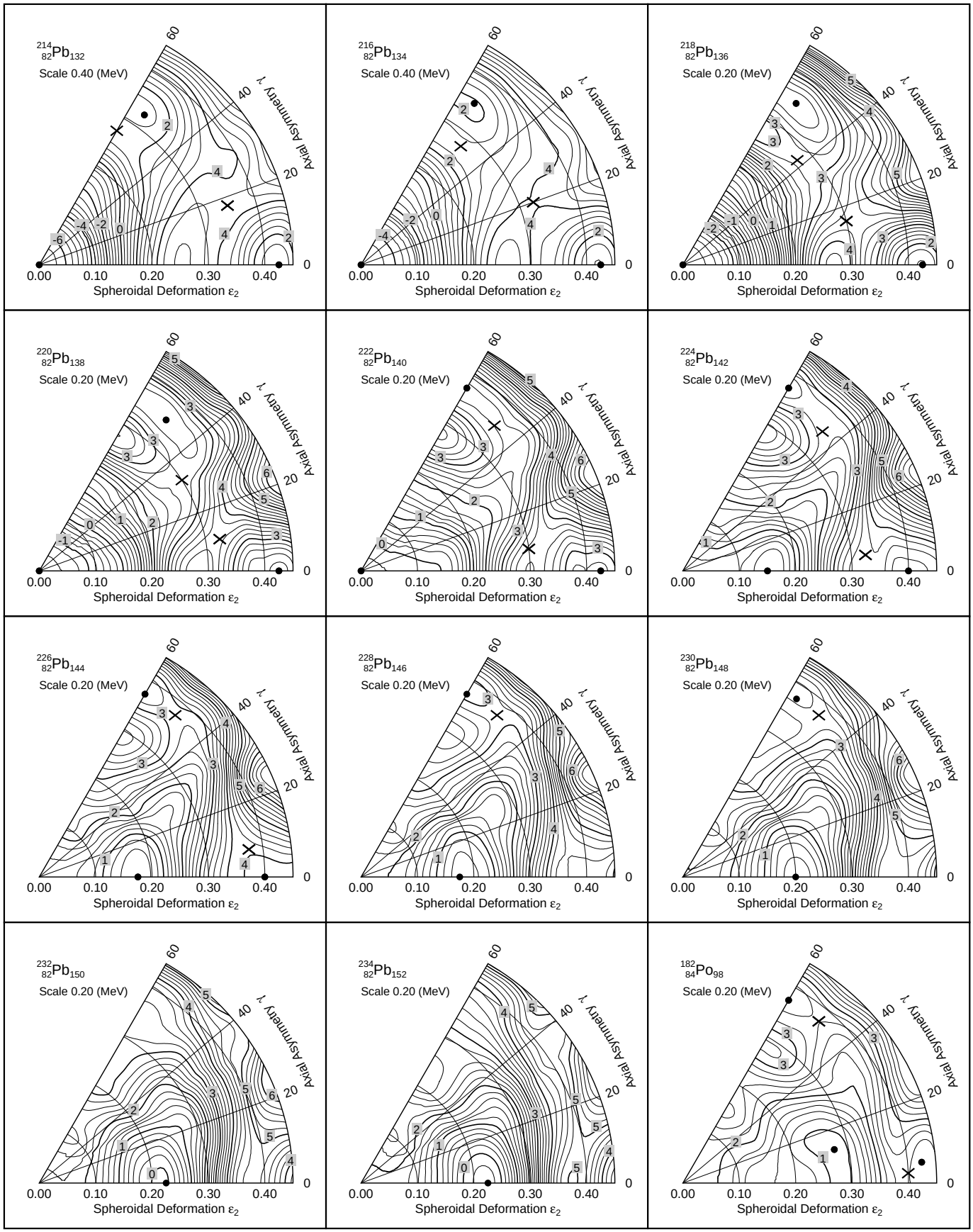
Graph 73


$^{224}_{80}Hg_{144}$
$^{226}_{80}Hg_{146}$
$^{228}_{80}Hg_{148}$
$^{230}_{80}Hg_{150}$
$^{232}_{80}Hg_{152}$
$^{176}_{82}Pb_{94}$
$^{178}_{82}Pb_{96}$
$^{180}_{82}Pb_{98}$
$^{182}_{82}Pb_{100}$
$^{184}_{82}Pb_{102}$
$^{186}_{82}Pb_{104}$
$^{188}_{82}Pb_{106}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

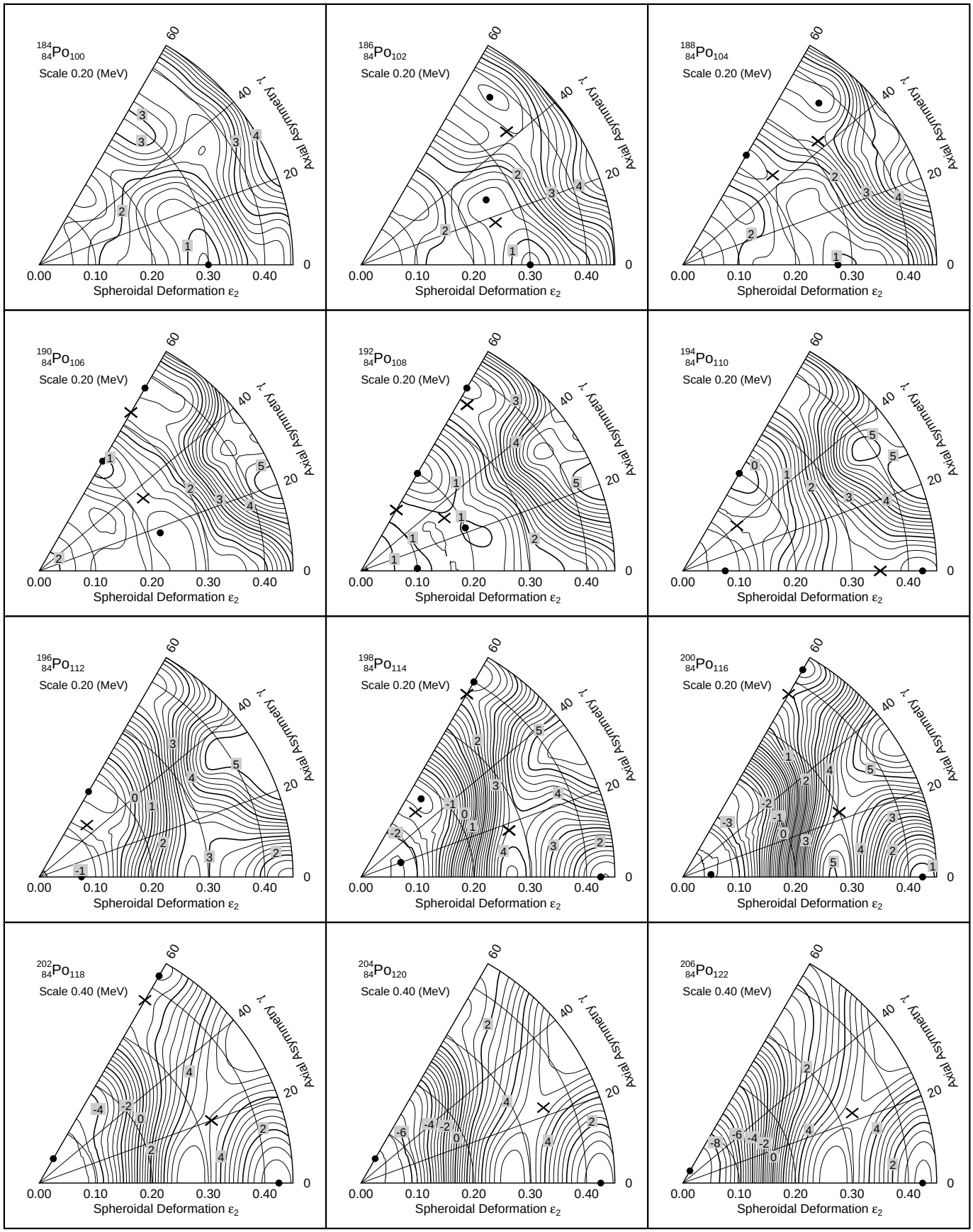
Graph 74


$^{190}_{82}Pb_{108}$ Scale 0.20 (MeV)
$^{192}_{82}Pb_{110}$ Scale 0.20 (MeV)
$^{194}_{82}Pb_{112}$ Scale 0.20 (MeV)
$^{196}_{82}Pb_{114}$ Scale 0.40 (MeV)
$^{198}_{82}Pb_{116}$ Scale 0.40 (MeV)
$^{200}_{82}Pb_{118}$ Scale 0.40 (MeV)
$^{202}_{82}Pb_{120}$ Scale 0.40 (MeV)
$^{204}_{82}Pb_{122}$ Scale 0.40 (MeV)
$^{206}_{82}Pb_{124}$ Scale 0.40 (MeV)
$^{208}_{82}Pb_{126}$ Scale 0.50 (MeV)
$^{210}_{82}Pb_{128}$ Scale 0.40 (MeV)
$^{212}_{82}Pb_{130}$ Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

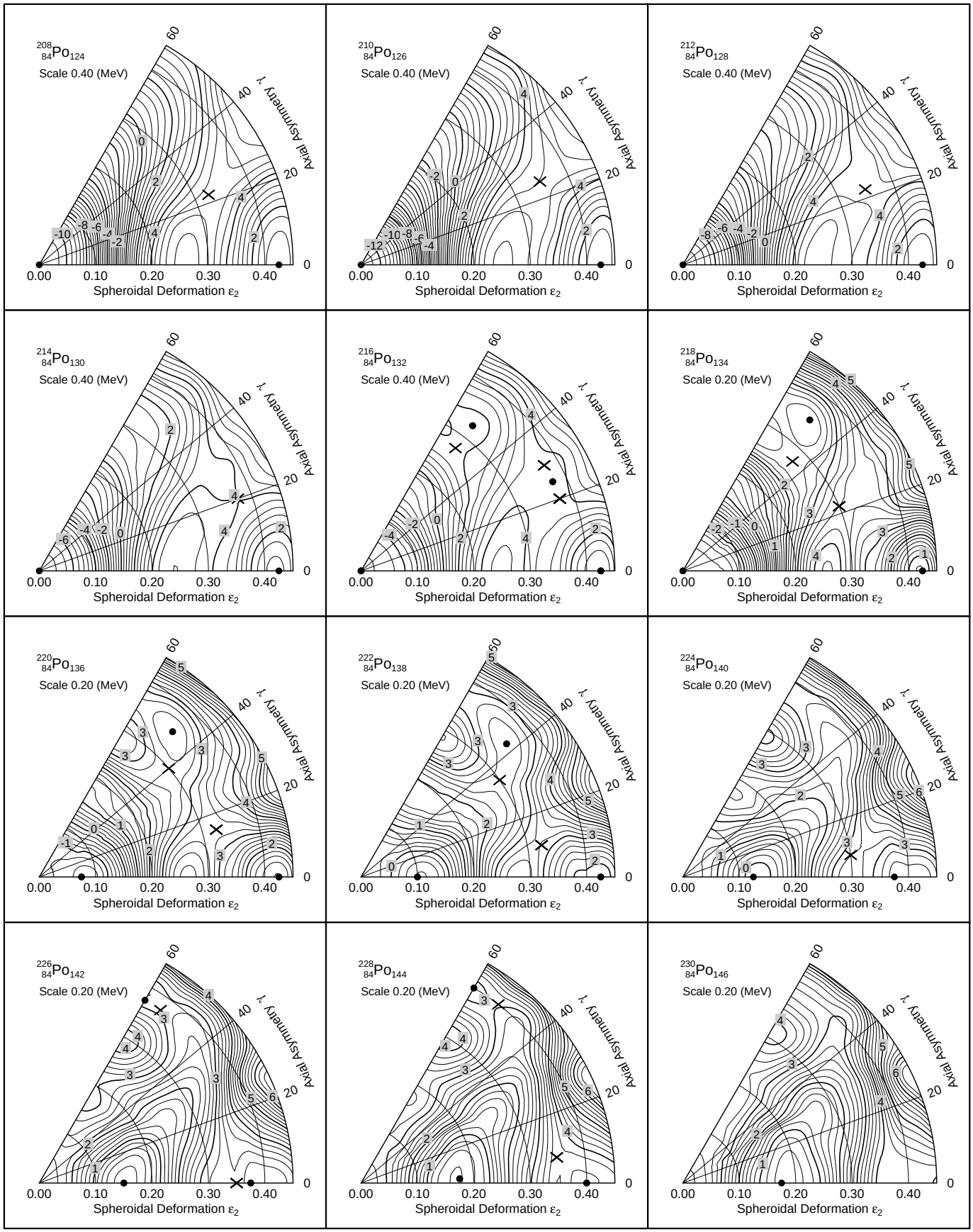
Graph 75


$^{214}_{82}Pb_{132}$ Scale 0.40 (MeV)
$^{216}_{82}Pb_{134}$ Scale 0.40 (MeV)
$^{218}_{82}Pb_{136}$ Scale 0.20 (MeV)
$^{220}_{82}Pb_{138}$ Scale 0.20 (MeV)
$^{222}_{82}Pb_{140}$ Scale 0.20 (MeV)
$^{224}_{82}Pb_{142}$ Scale 0.20 (MeV)
$^{226}_{82}Pb_{144}$ Scale 0.20 (MeV)
$^{228}_{82}Pb_{146}$ Scale 0.20 (MeV)
$^{230}_{82}Pb_{148}$ Scale 0.20 (MeV)
$^{232}_{82}Pb_{150}$ Scale 0.20 (MeV)
$^{234}_{82}Pb_{152}$ Scale 0.20 (MeV)
$^{182}_{84}Po_{98}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

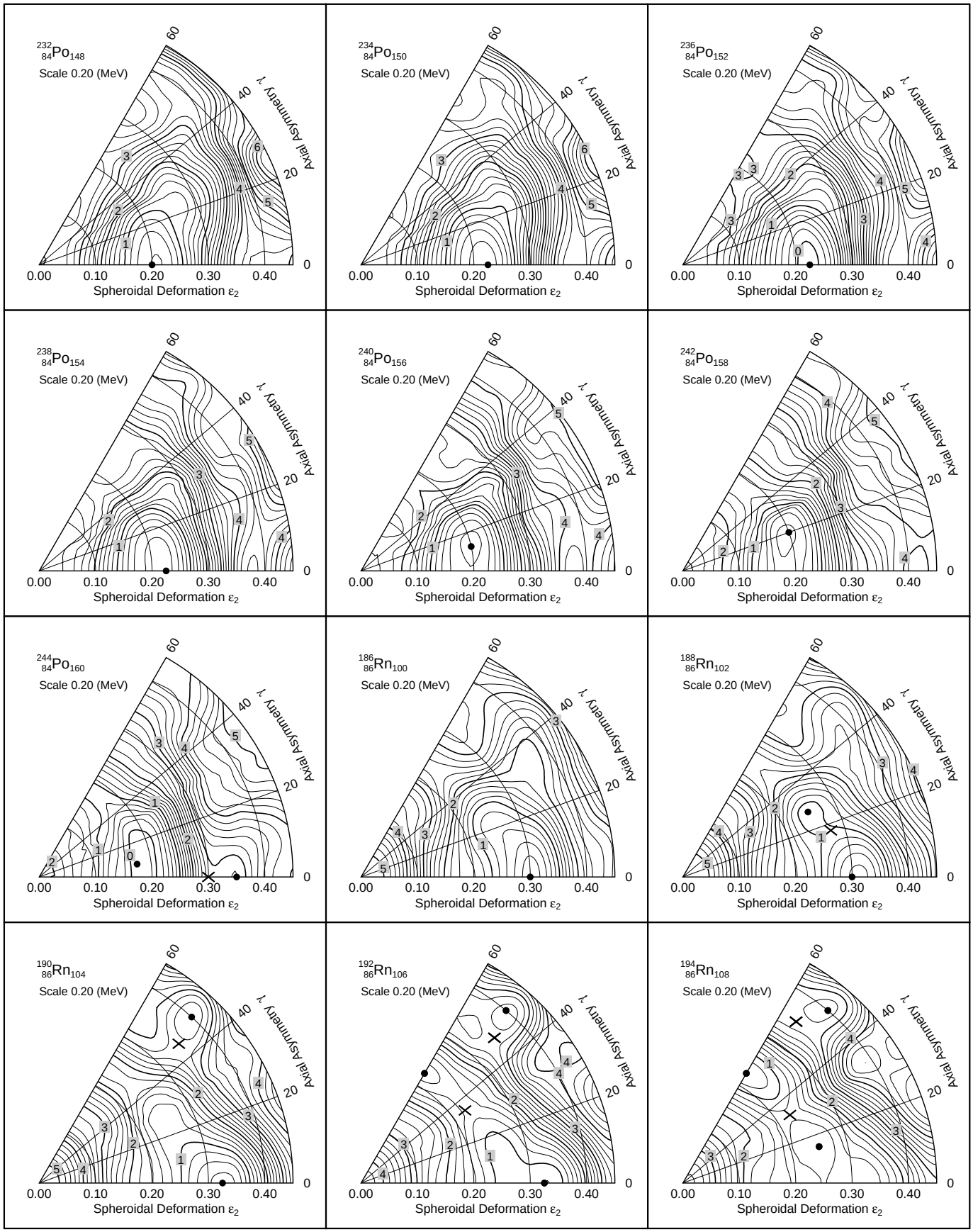
Graph 76


$^{184}_{84}Po_{100}$ Scale 0.20 (MeV)
$^{186}_{84}Po_{102}$ Scale 0.20 (MeV)
$^{188}_{84}Po_{104}$ Scale 0.20 (MeV)
$^{190}_{84}Po_{106}$ Scale 0.20 (MeV)
$^{192}_{84}Po_{108}$ Scale 0.20 (MeV)
$^{194}_{84}Po_{110}$ Scale 0.20 (MeV)
$^{196}_{84}Po_{112}$ Scale 0.20 (MeV)
$^{198}_{84}Po_{114}$ Scale 0.20 (MeV)
$^{200}_{84}Po_{116}$ Scale 0.20 (MeV)
$^{202}_{84}Po_{118}$ Scale 0.40 (MeV)
$^{204}_{84}Po_{120}$ Scale 0.40 (MeV)
$^{206}_{84}Po_{122}$ Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

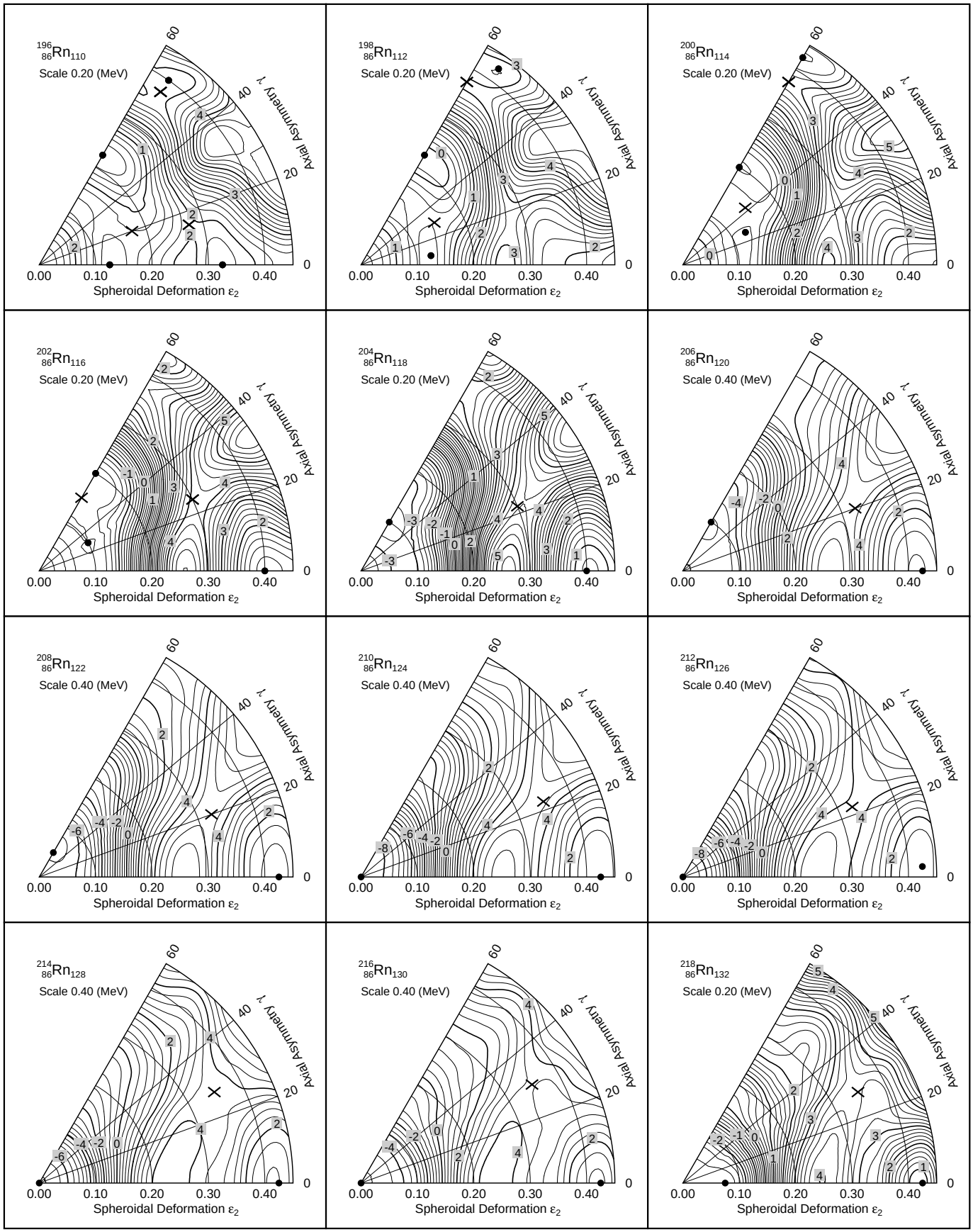
Graph 77


$^{208}_{84}Po_{124}$ Scale 0.40 (MeV)
$^{210}_{84}Po_{126}$ Scale 0.40 (MeV)
$^{212}_{84}Po_{128}$ Scale 0.40 (MeV)
$^{214}_{84}Po_{130}$ Scale 0.40 (MeV)
$^{216}_{84}Po_{132}$ Scale 0.40 (MeV)
$^{218}_{84}Po_{134}$ Scale 0.20 (MeV)
$^{220}_{84}Po_{136}$ Scale 0.20 (MeV)
$^{222}_{84}Po_{138}$ Scale 0.20 (MeV)
$^{224}_{84}Po_{140}$ Scale 0.20 (MeV)
$^{226}_{84}Po_{142}$ Scale 0.20 (MeV)
$^{228}_{84}Po_{144}$ Scale 0.20 (MeV)
$^{230}_{84}Po_{146}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

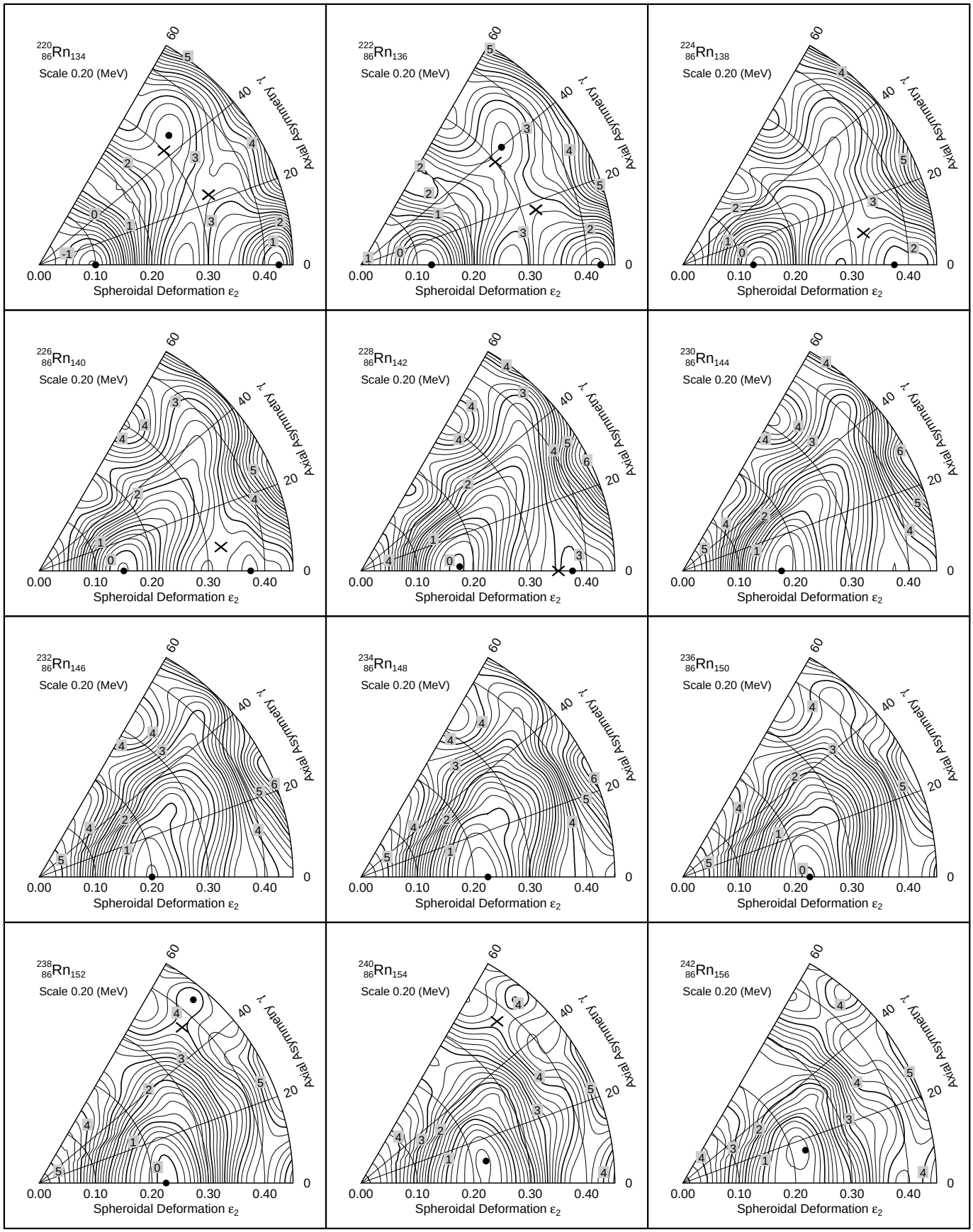
Graph 78


$^{232}_{84}Po_{148}$
$^{234}_{84}Po_{150}$
$^{236}_{84}Po_{152}$
$^{238}_{84}Po_{154}$
$^{240}_{84}Po_{156}$
$^{242}_{84}Po_{158}$
$^{244}_{84}Po_{160}$
$^{186}_{86}Rn_{100}$
$^{188}_{86}Rn_{102}$
$^{190}_{86}Rn_{104}$
$^{192}_{86}Rn_{106}$
$^{194}_{86}Rn_{108}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

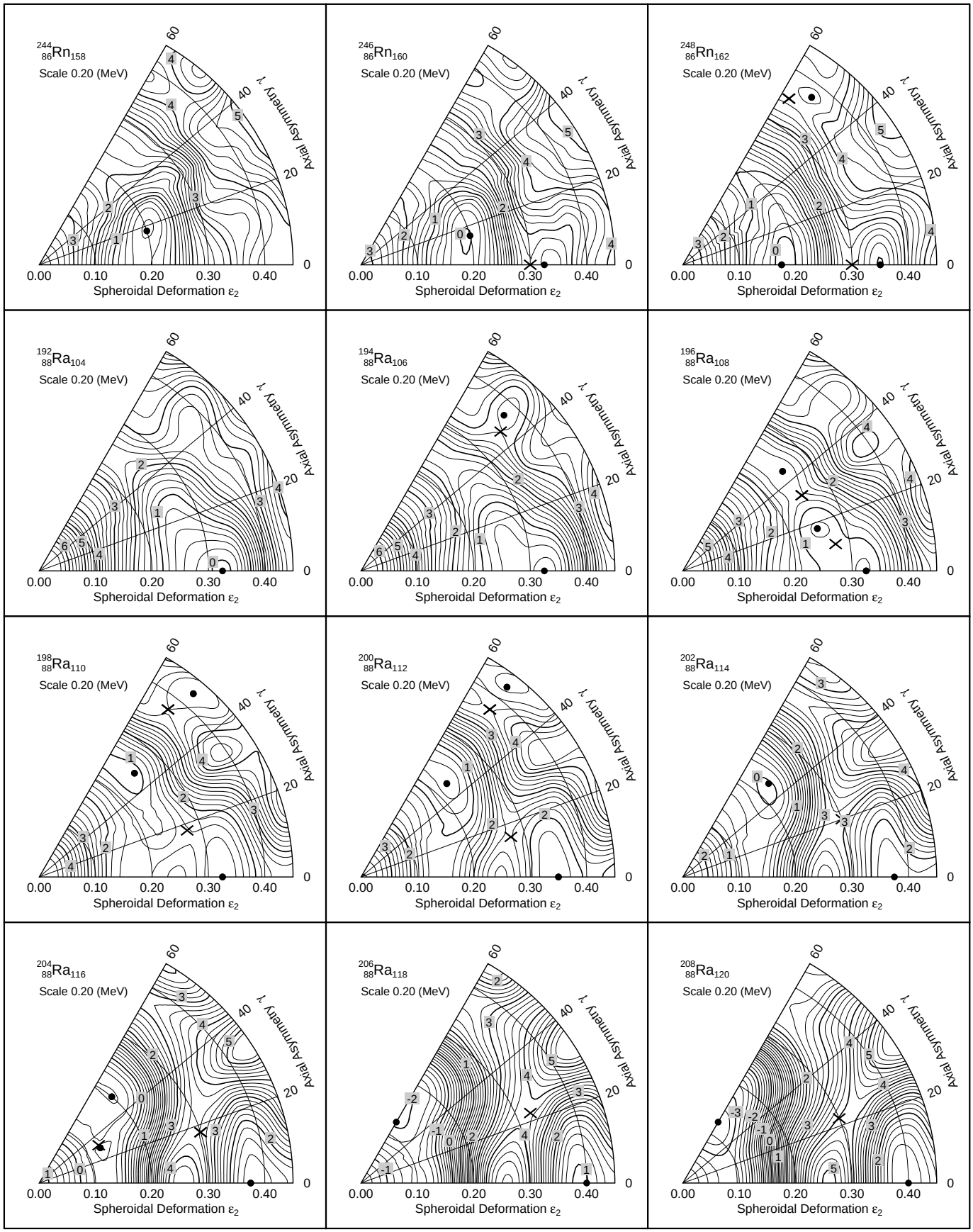
Graph 79


$^{196}_{86}Rn_{110}$ Scale 0.20 (MeV)
$^{198}_{86}Rn_{112}$ Scale 0.20 (MeV)
$^{200}_{86}Rn_{114}$ Scale 0.20 (MeV)
$^{202}_{86}Rn_{116}$ Scale 0.20 (MeV)
$^{204}_{86}Rn_{118}$ Scale 0.20 (MeV)
$^{206}_{86}Rn_{120}$ Scale 0.40 (MeV)
$^{208}_{86}Rn_{122}$ Scale 0.40 (MeV)
$^{210}_{86}Rn_{124}$ Scale 0.40 (MeV)
$^{212}_{86}Rn_{126}$ Scale 0.40 (MeV)
$^{214}_{86}Rn_{128}$ Scale 0.40 (MeV)
$^{216}_{86}Rn_{130}$ Scale 0.40 (MeV)
$^{218}_{86}Rn_{132}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

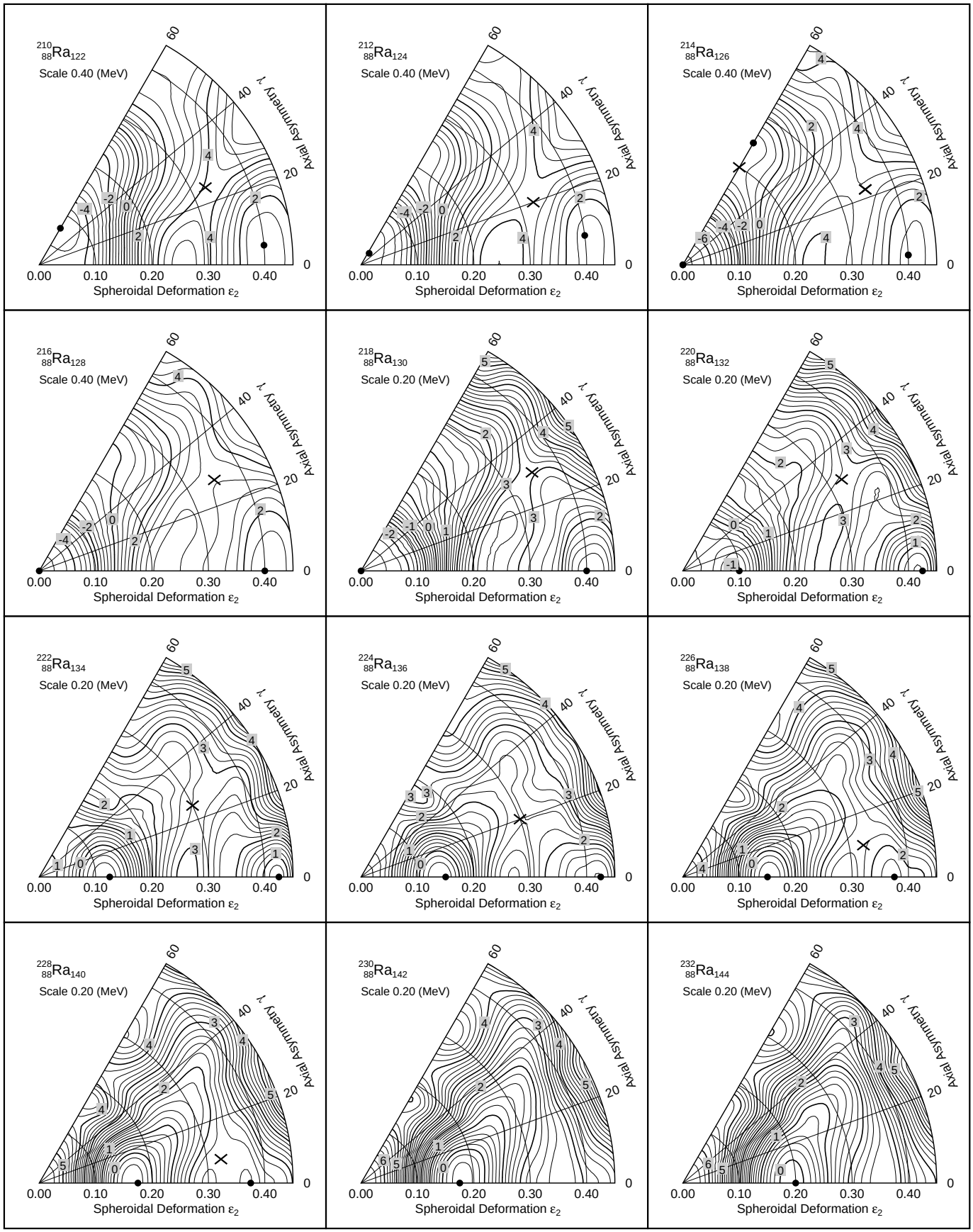
Graph 80


$^{220}_{86}Rn_{134}$
$^{222}_{86}Rn_{136}$
$^{224}_{86}Rn_{138}$
$^{226}_{86}Rn_{140}$
$^{228}_{86}Rn_{142}$
$^{230}_{86}Rn_{144}$
$^{232}_{86}Rn_{146}$
$^{234}_{86}Rn_{148}$
$^{236}_{86}Rn_{150}$
$^{238}_{86}Rn_{152}$
$^{240}_{86}Rn_{154}$
$^{242}_{86}Rn_{156}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

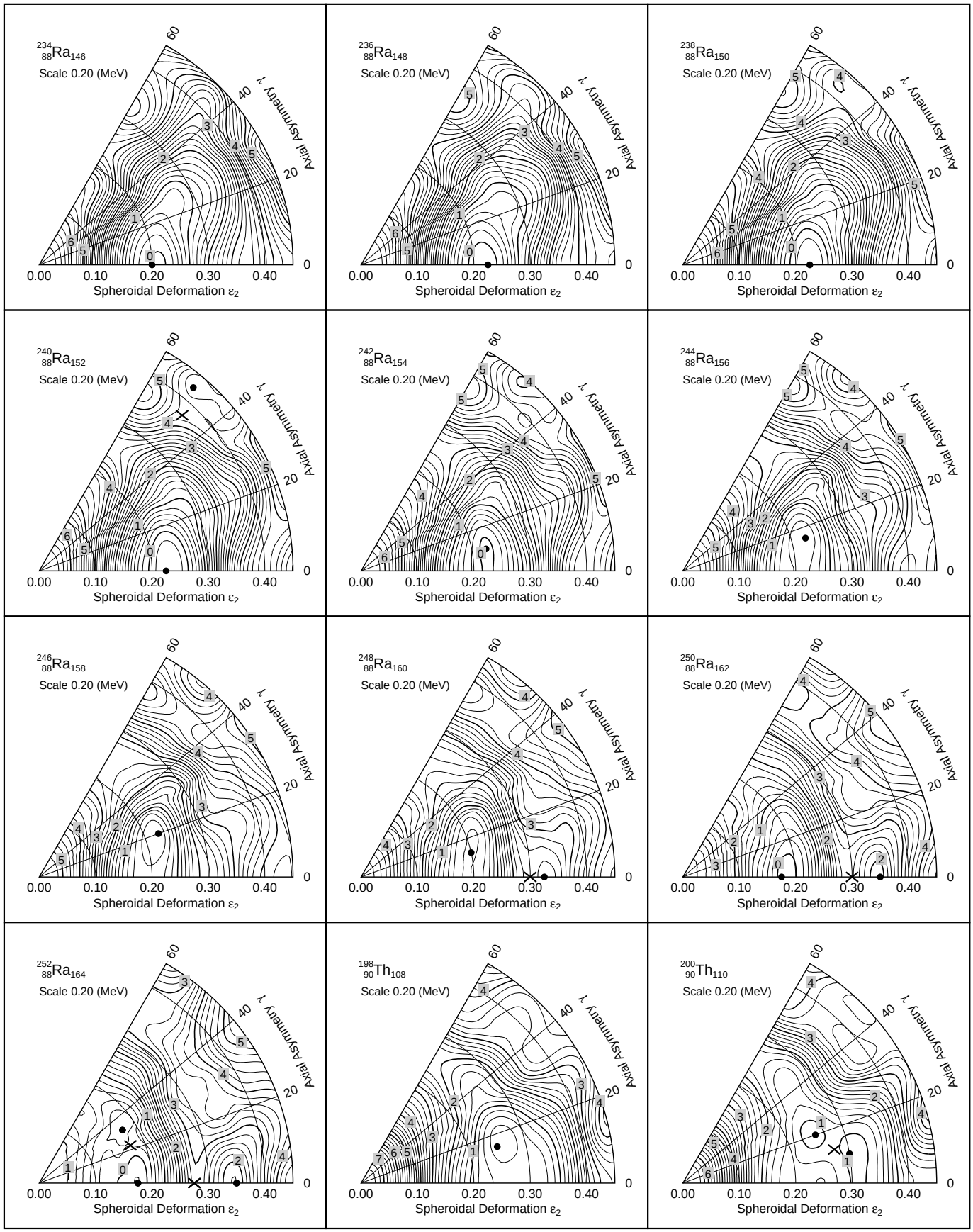
Graph 81


$^{244}_{86}Rn_{158}$
$^{246}_{86}Rn_{160}$
$^{248}_{86}Rn_{162}$
$^{192}_{88}Ra_{104}$
$^{194}_{88}Ra_{106}$
$^{196}_{88}Ra_{108}$
$^{198}_{88}Ra_{110}$
$^{200}_{88}Ra_{112}$
$^{202}_{88}Ra_{114}$
$^{204}_{88}Ra_{116}$
$^{206}_{88}Ra_{118}$
$^{208}_{88}Ra_{120}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

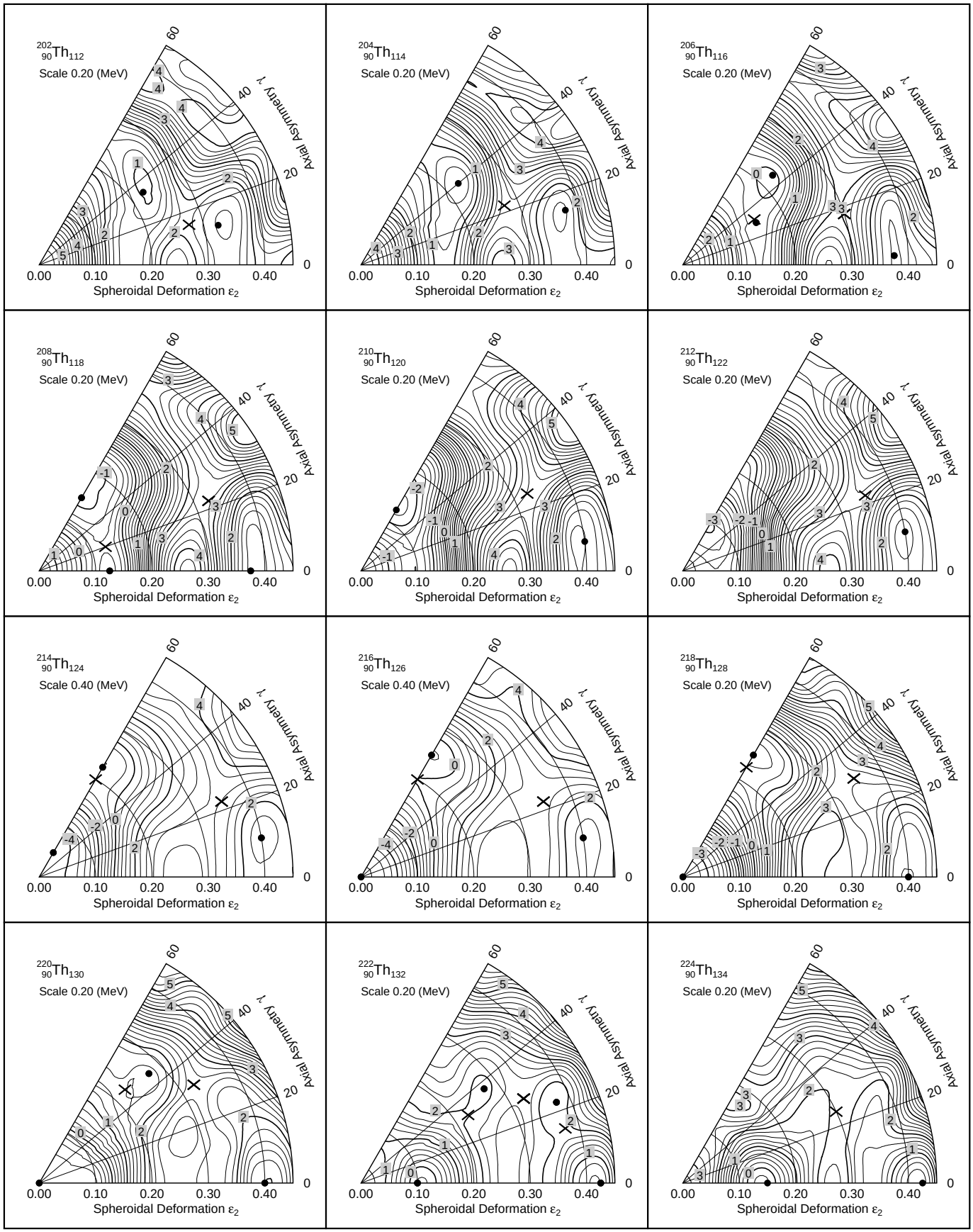
Graph 82


$^{210}_{88}Ra_{122}$ Scale 0.40 (MeV)
$^{212}_{88}Ra_{124}$ Scale 0.40 (MeV)
$^{214}_{88}Ra_{126}$ Scale 0.40 (MeV)
$^{216}_{88}Ra_{128}$ Scale 0.40 (MeV)
$^{218}_{88}Ra_{130}$ Scale 0.20 (MeV)
$^{220}_{88}Ra_{132}$ Scale 0.20 (MeV)
$^{222}_{88}Ra_{134}$ Scale 0.20 (MeV)
$^{224}_{88}Ra_{136}$ Scale 0.20 (MeV)
$^{226}_{88}Ra_{138}$ Scale 0.20 (MeV)
$^{228}_{88}Ra_{140}$ Scale 0.20 (MeV)
$^{230}_{88}Ra_{142}$ Scale 0.20 (MeV)
$^{232}_{88}Ra_{144}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

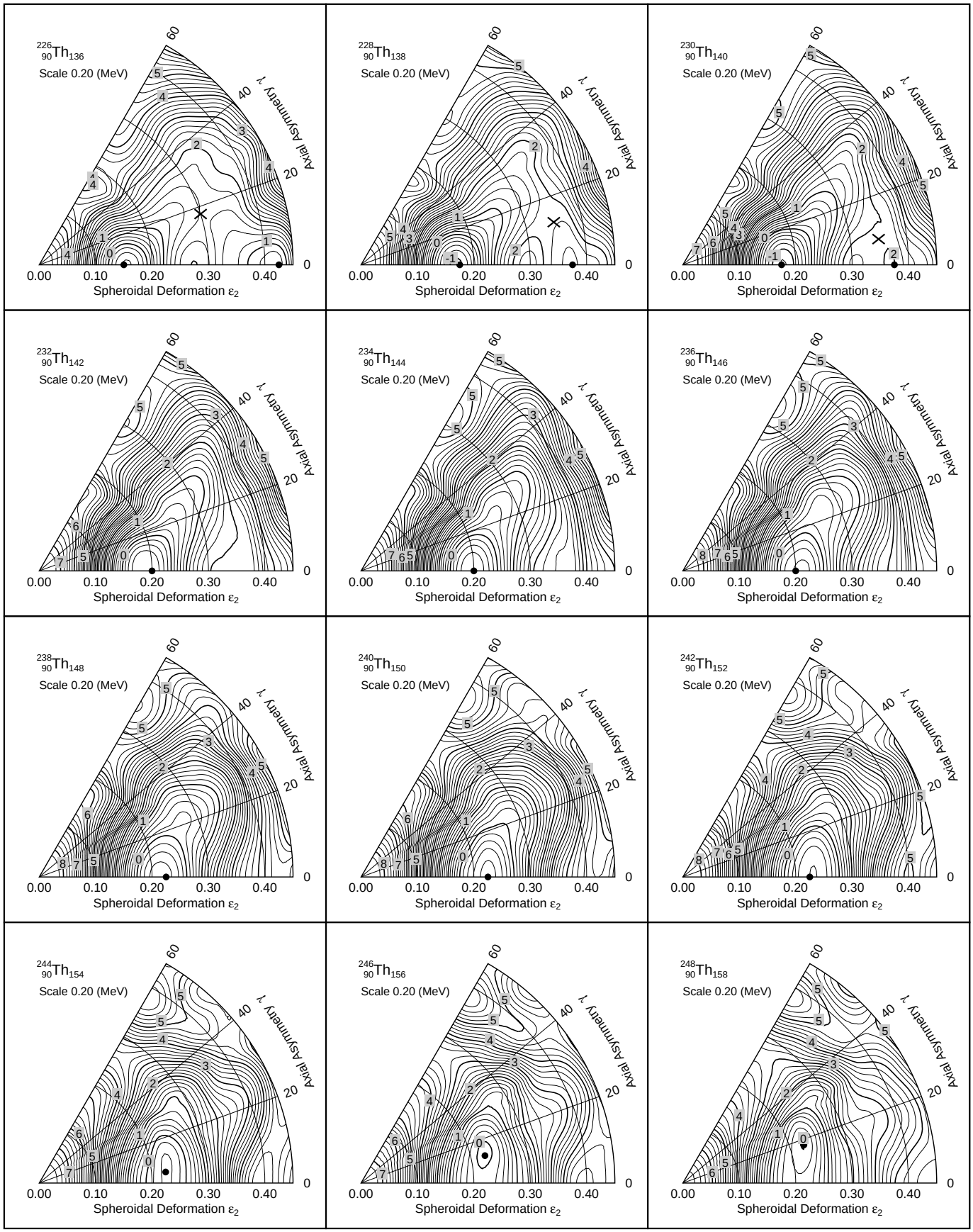
Graph 83


$^{234}_{88}Ra_{146}$ Scale 0.20 (MeV)
$^{236}_{88}Ra_{148}$ Scale 0.20 (MeV)
$^{238}_{88}Ra_{150}$ Scale 0.20 (MeV)
$^{240}_{88}Ra_{152}$ Scale 0.20 (MeV)
$^{242}_{88}Ra_{154}$ Scale 0.20 (MeV)
$^{244}_{88}Ra_{156}$ Scale 0.20 (MeV)
$^{246}_{88}Ra_{158}$ Scale 0.20 (MeV)
$^{248}_{88}Ra_{160}$ Scale 0.20 (MeV)
$^{250}_{88}Ra_{162}$ Scale 0.20 (MeV)
$^{252}_{88}Ra_{164}$ Scale 0.20 (MeV)
$^{198}_{90}Th_{108}$ Scale 0.20 (MeV)
$^{200}_{90}Th_{110}$ Scale 0.20 (MeV)
Axial Asymmetry γ
60
40
20
0
0.00 0.10 0.20 0.30 0.40
Spheroidal Deformation ε_2

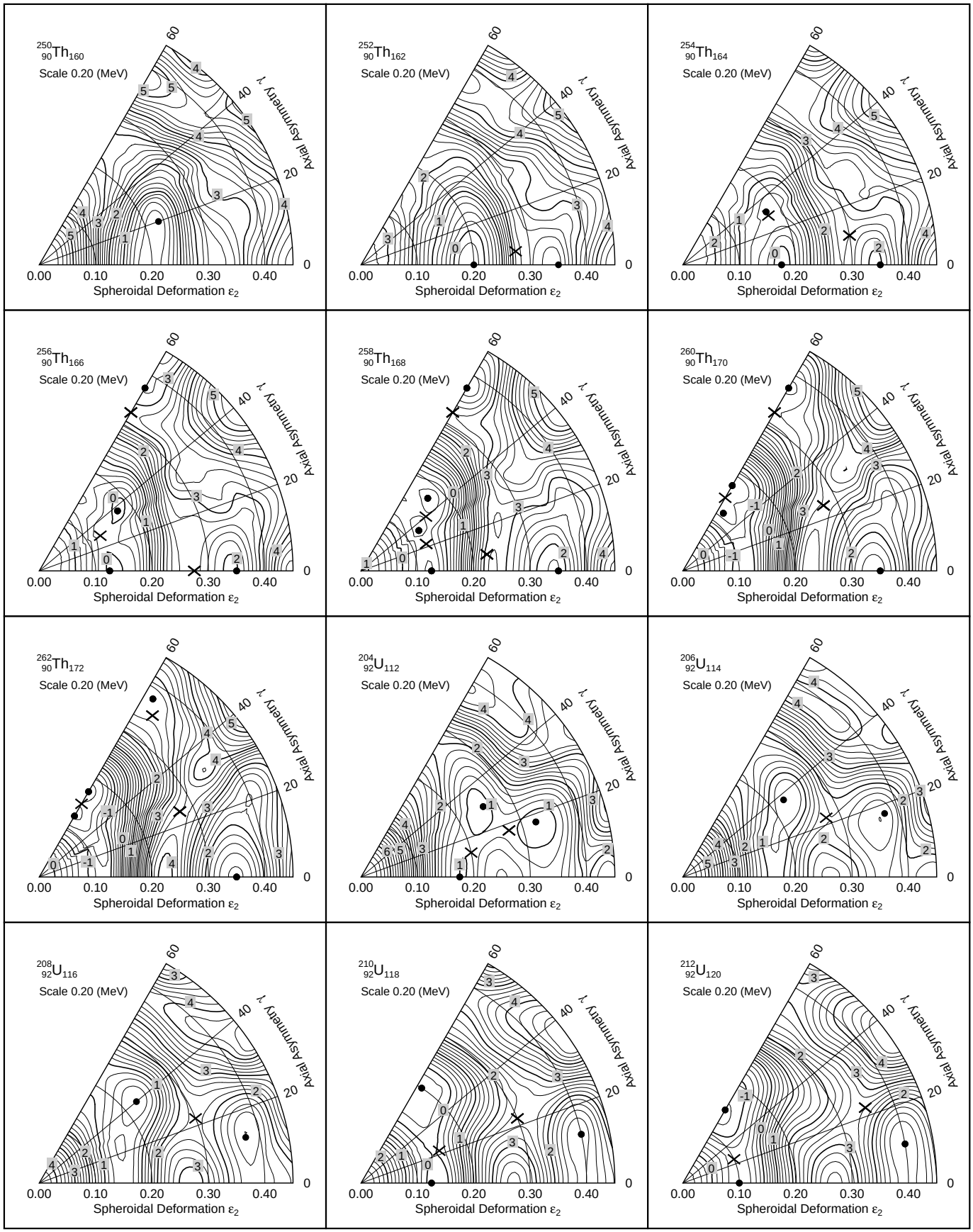
Graph 84


$^{202}_{90}Th_{112}$ Scale 0.20 (MeV)
$^{204}_{90}Th_{114}$ Scale 0.20 (MeV)
$^{206}_{90}Th_{116}$ Scale 0.20 (MeV)
$^{208}_{90}Th_{118}$ Scale 0.20 (MeV)
$^{210}_{90}Th_{120}$ Scale 0.20 (MeV)
$^{212}_{90}Th_{122}$ Scale 0.20 (MeV)
$^{214}_{90}Th_{124}$ Scale 0.40 (MeV)
$^{216}_{90}Th_{126}$ Scale 0.40 (MeV)
$^{218}_{90}Th_{128}$ Scale 0.20 (MeV)
$^{220}_{90}Th_{130}$ Scale 0.20 (MeV)
$^{222}_{90}Th_{132}$ Scale 0.20 (MeV)
$^{224}_{90}Th_{134}$ Scale 0.20 (MeV)
Axial Asymmetry γ
60
40
20
0
0.00 0.10 0.20 0.30 0.40
Spheroidal Deformation ε_2

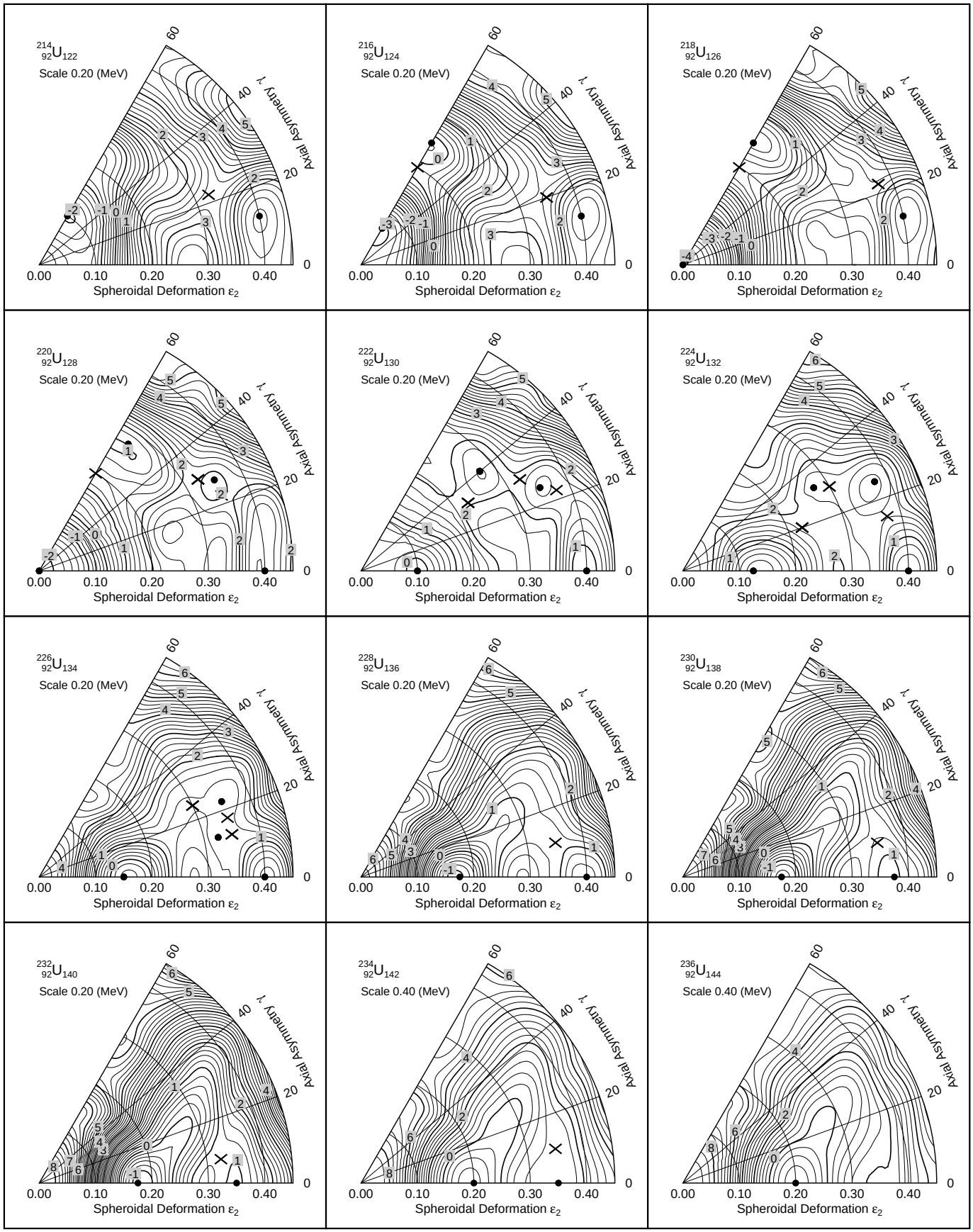
Graph 85


$^{226}_{90}Th_{136}$
$^{228}_{90}Th_{138}$
$^{230}_{90}Th_{140}$
$^{232}_{90}Th_{142}$
$^{234}_{90}Th_{144}$
$^{236}_{90}Th_{146}$
$^{238}_{90}Th_{148}$
$^{240}_{90}Th_{150}$
$^{242}_{90}Th_{152}$
$^{244}_{90}Th_{154}$
$^{246}_{90}Th_{156}$
$^{248}_{90}Th_{158}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

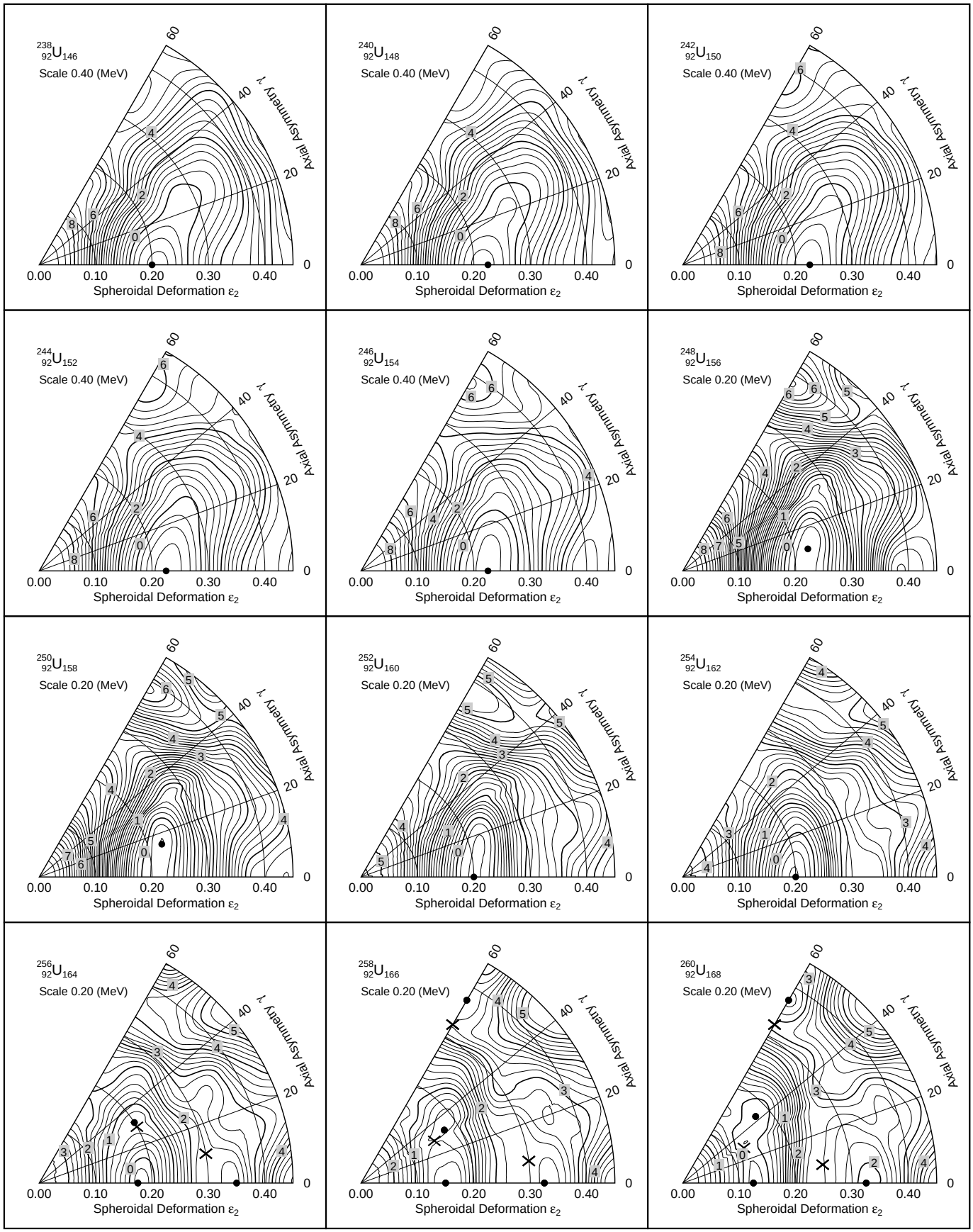
Graph 86


$^{250}_{90}Th_{160}$
$^{252}_{90}Th_{162}$
$^{254}_{90}Th_{164}$
$^{256}_{90}Th_{166}$
$^{258}_{90}Th_{168}$
$^{260}_{90}Th_{170}$
$^{262}_{90}Th_{172}$
$^{204}_{92}U_{112}$
$^{206}_{92}U_{114}$
$^{208}_{92}U_{116}$
$^{210}_{92}U_{118}$
$^{212}_{92}U_{120}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

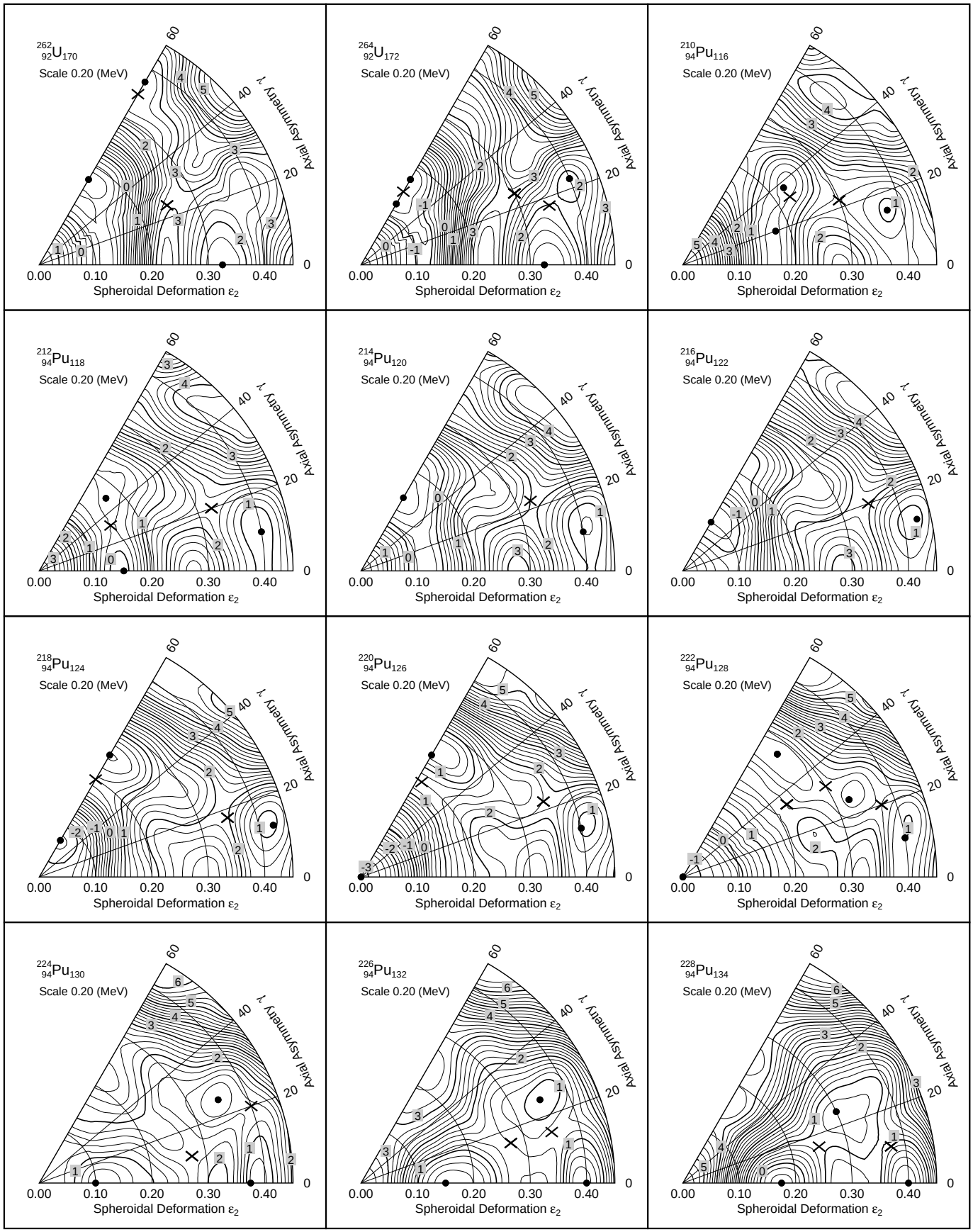
Graph 87


$^{214}_{92}U_{122}$ Scale 0.20 (MeV)
$^{216}_{92}U_{124}$ Scale 0.20 (MeV)
$^{218}_{92}U_{126}$ Scale 0.20 (MeV)
$^{220}_{92}U_{128}$ Scale 0.20 (MeV)
$^{222}_{92}U_{130}$ Scale 0.20 (MeV)
$^{224}_{92}U_{132}$ Scale 0.20 (MeV)
$^{226}_{92}U_{134}$ Scale 0.20 (MeV)
$^{228}_{92}U_{136}$ Scale 0.20 (MeV)
$^{230}_{92}U_{138}$ Scale 0.20 (MeV)
$^{232}_{92}U_{140}$ Scale 0.20 (MeV)
$^{234}_{92}U_{142}$ Scale 0.40 (MeV)
$^{236}_{92}U_{144}$ Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

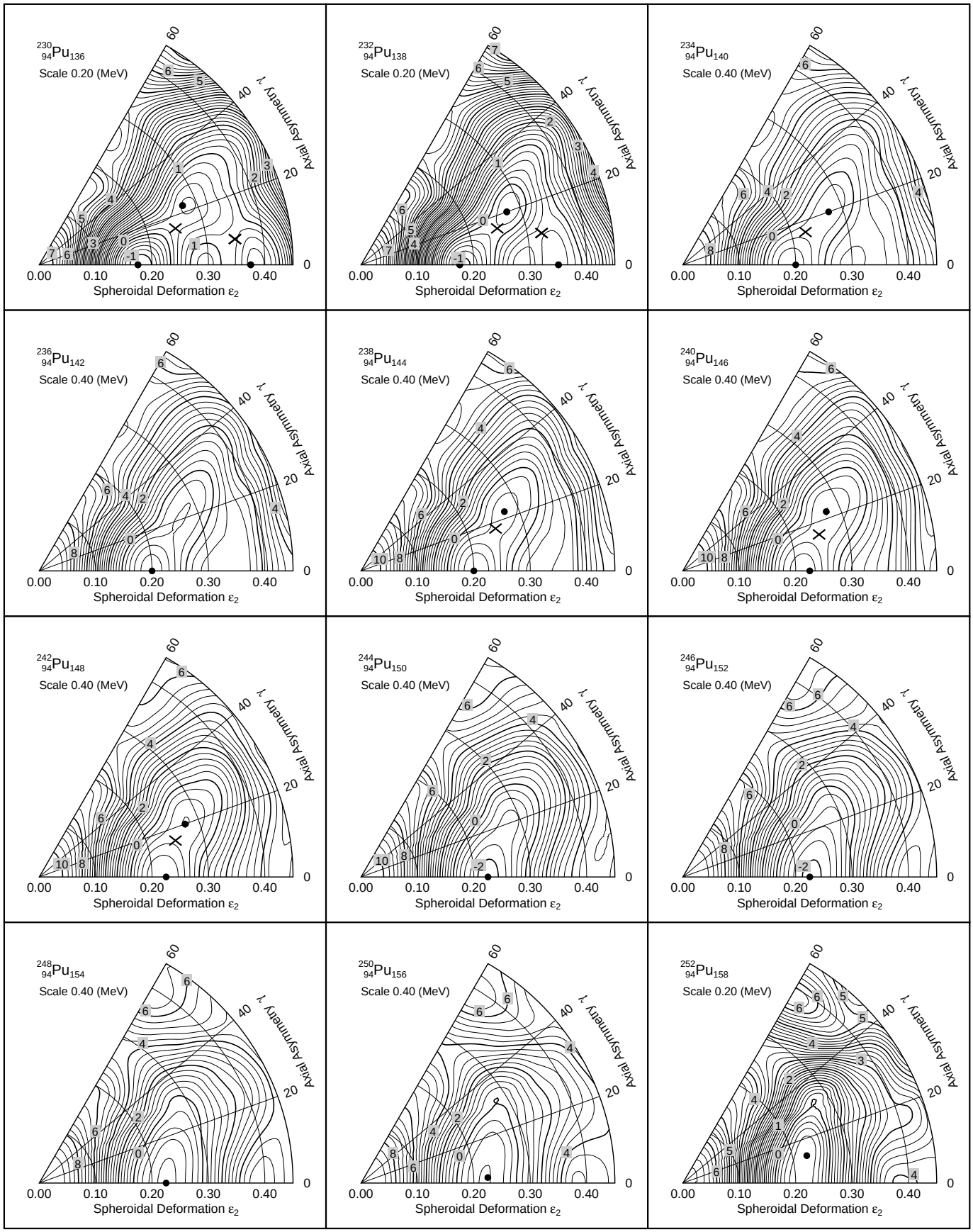
Graph 88


$^{238}_{92}U_{146}$ Scale 0.40 (MeV)
$^{240}_{92}U_{148}$ Scale 0.40 (MeV)
$^{242}_{92}U_{150}$ Scale 0.40 (MeV)
$^{244}_{92}U_{152}$ Scale 0.40 (MeV)
$^{246}_{92}U_{154}$ Scale 0.40 (MeV)
$^{248}_{92}U_{156}$ Scale 0.20 (MeV)
$^{250}_{92}U_{158}$ Scale 0.20 (MeV)
$^{252}_{92}U_{160}$ Scale 0.20 (MeV)
$^{254}_{92}U_{162}$ Scale 0.20 (MeV)
$^{256}_{92}U_{164}$ Scale 0.20 (MeV)
$^{258}_{92}U_{166}$ Scale 0.20 (MeV)
$^{260}_{92}U_{168}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

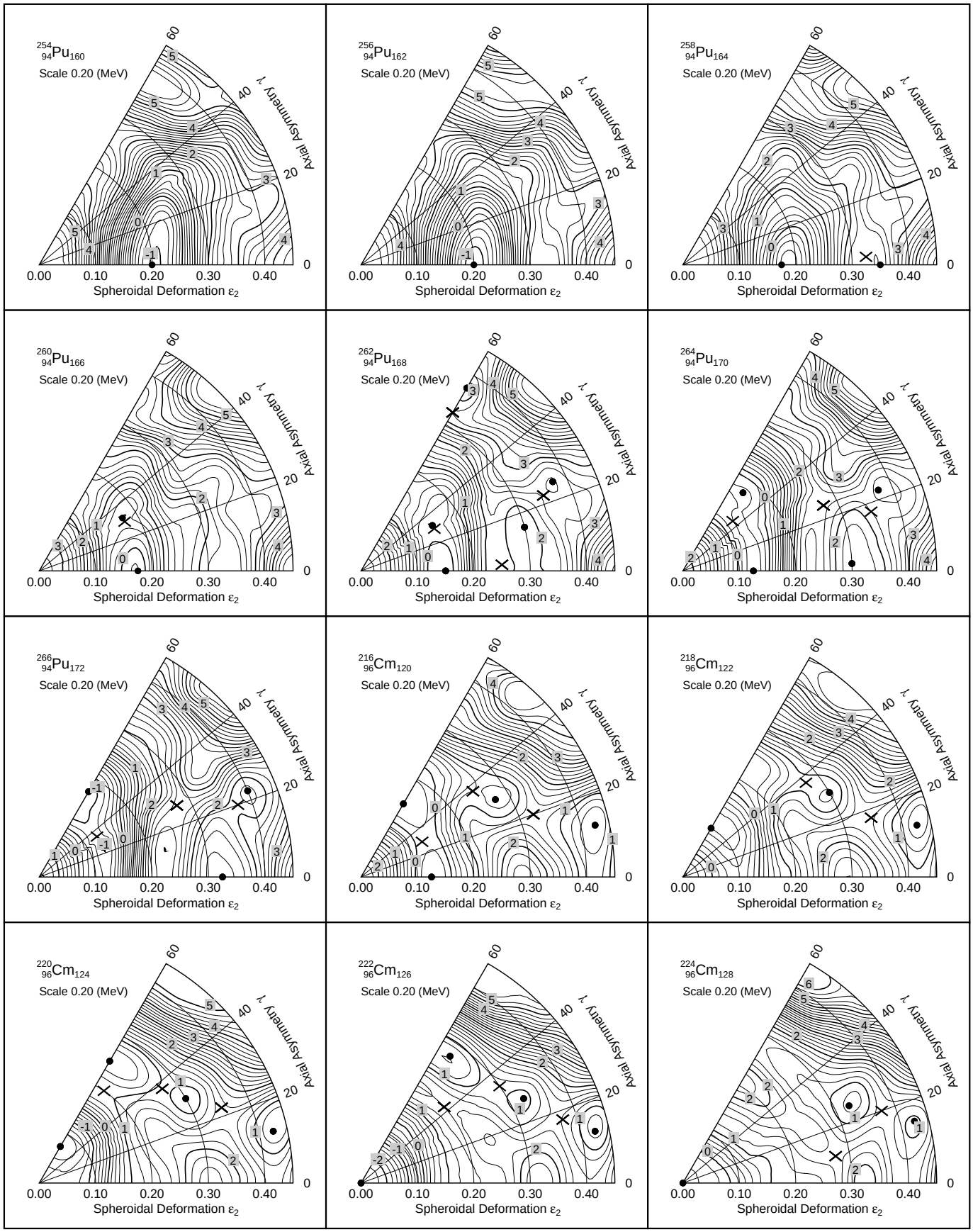
Graph 89


$^{262}_{92}U_{170}$
$^{264}_{92}U_{172}$
$^{210}_{94}Pu_{116}$
$^{212}_{94}Pu_{118}$
$^{214}_{94}Pu_{120}$
$^{216}_{94}Pu_{122}$
$^{218}_{94}Pu_{124}$
$^{220}_{94}Pu_{126}$
$^{222}_{94}Pu_{128}$
$^{224}_{94}Pu_{130}$
$^{226}_{94}Pu_{132}$
$^{228}_{94}Pu_{134}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

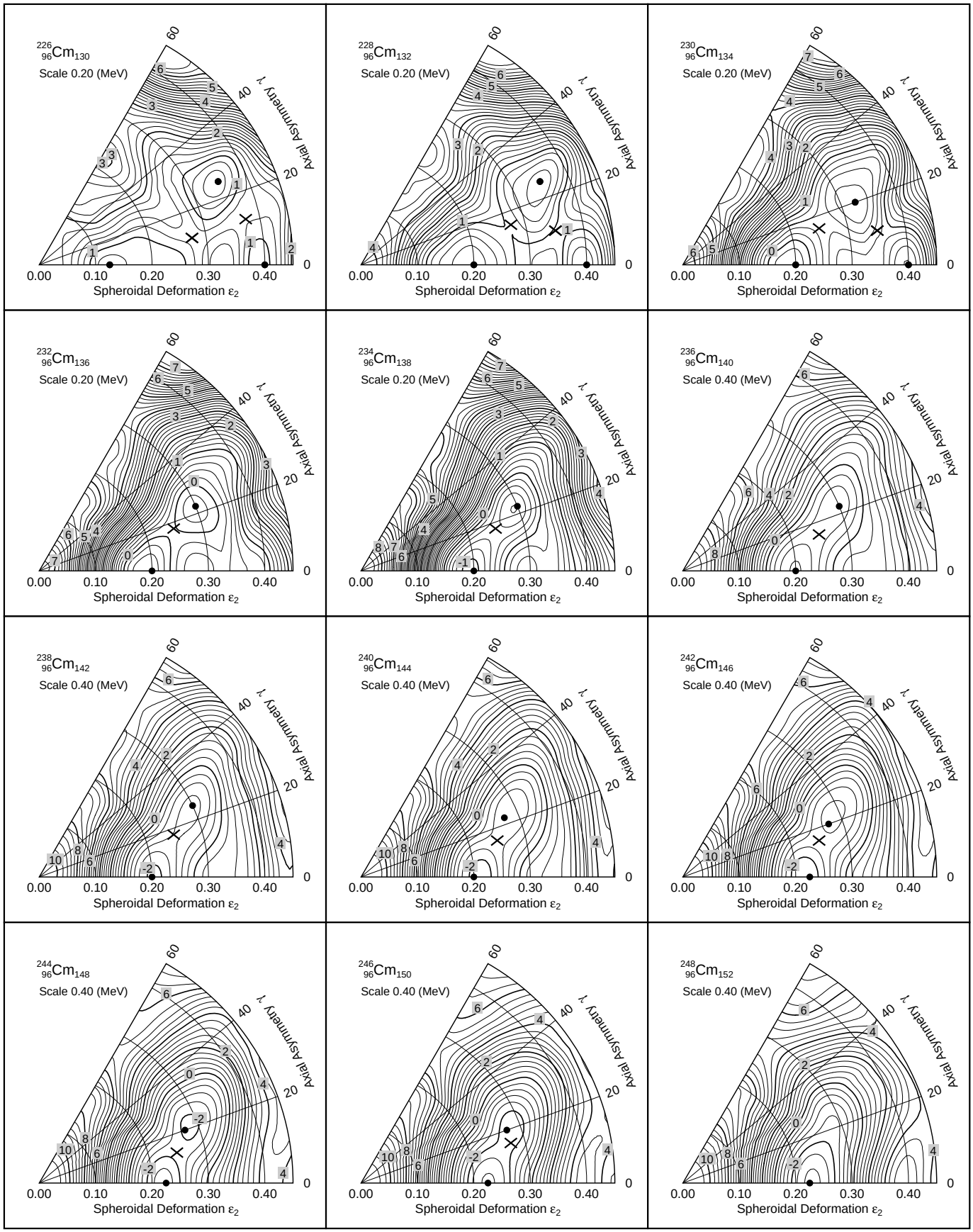
Graph 90


$^{230}_{94}Pu_{136}$ Scale 0.20 (MeV)
$^{232}_{94}Pu_{138}$ Scale 0.20 (MeV)
$^{234}_{94}Pu_{140}$ Scale 0.40 (MeV)
$^{236}_{94}Pu_{142}$ Scale 0.40 (MeV)
$^{238}_{94}Pu_{144}$ Scale 0.40 (MeV)
$^{240}_{94}Pu_{146}$ Scale 0.40 (MeV)
$^{242}_{94}Pu_{148}$ Scale 0.40 (MeV)
$^{244}_{94}Pu_{150}$ Scale 0.40 (MeV)
$^{246}_{94}Pu_{152}$ Scale 0.40 (MeV)
$^{248}_{94}Pu_{154}$ Scale 0.40 (MeV)
$^{250}_{94}Pu_{156}$ Scale 0.40 (MeV)
$^{252}_{94}Pu_{158}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

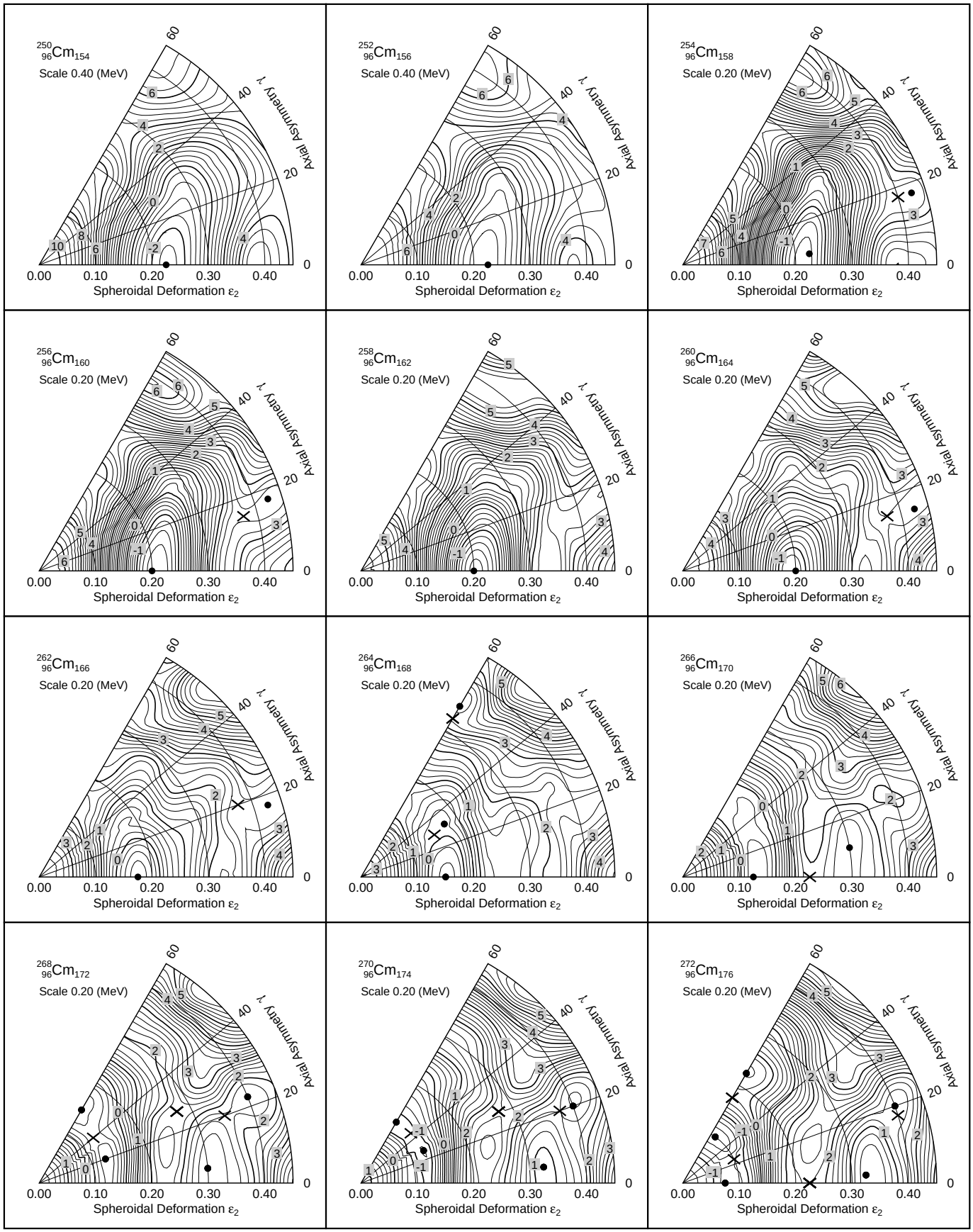
Graph 91


$^{254}_{94}Pu_{160}$
$^{256}_{94}Pu_{162}$
$^{258}_{94}Pu_{164}$
$^{260}_{94}Pu_{166}$
$^{262}_{94}Pu_{168}$
$^{264}_{94}Pu_{170}$
$^{266}_{94}Pu_{172}$
$^{216}_{96}Cm_{120}$
$^{218}_{96}Cm_{122}$
$^{220}_{96}Cm_{124}$
$^{222}_{96}Cm_{126}$
$^{224}_{96}Cm_{128}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

Graph 92


$^{226}_{96}Cm_{130}$ Scale 0.20 (MeV)
$^{228}_{96}Cm_{132}$ Scale 0.20 (MeV)
$^{230}_{96}Cm_{134}$ Scale 0.20 (MeV)
$^{232}_{96}Cm_{136}$ Scale 0.20 (MeV)
$^{234}_{96}Cm_{138}$ Scale 0.20 (MeV)
$^{236}_{96}Cm_{140}$ Scale 0.40 (MeV)
$^{238}_{96}Cm_{142}$ Scale 0.40 (MeV)
$^{240}_{96}Cm_{144}$ Scale 0.40 (MeV)
$^{242}_{96}Cm_{146}$ Scale 0.40 (MeV)
$^{244}_{96}Cm_{148}$ Scale 0.40 (MeV)
$^{246}_{96}Cm_{150}$ Scale 0.40 (MeV)
$^{248}_{96}Cm_{152}$ Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

Graph 93


$^{250}_{96}Cm_{154}$ Scale 0.40 (MeV)
$^{252}_{96}Cm_{156}$ Scale 0.40 (MeV)
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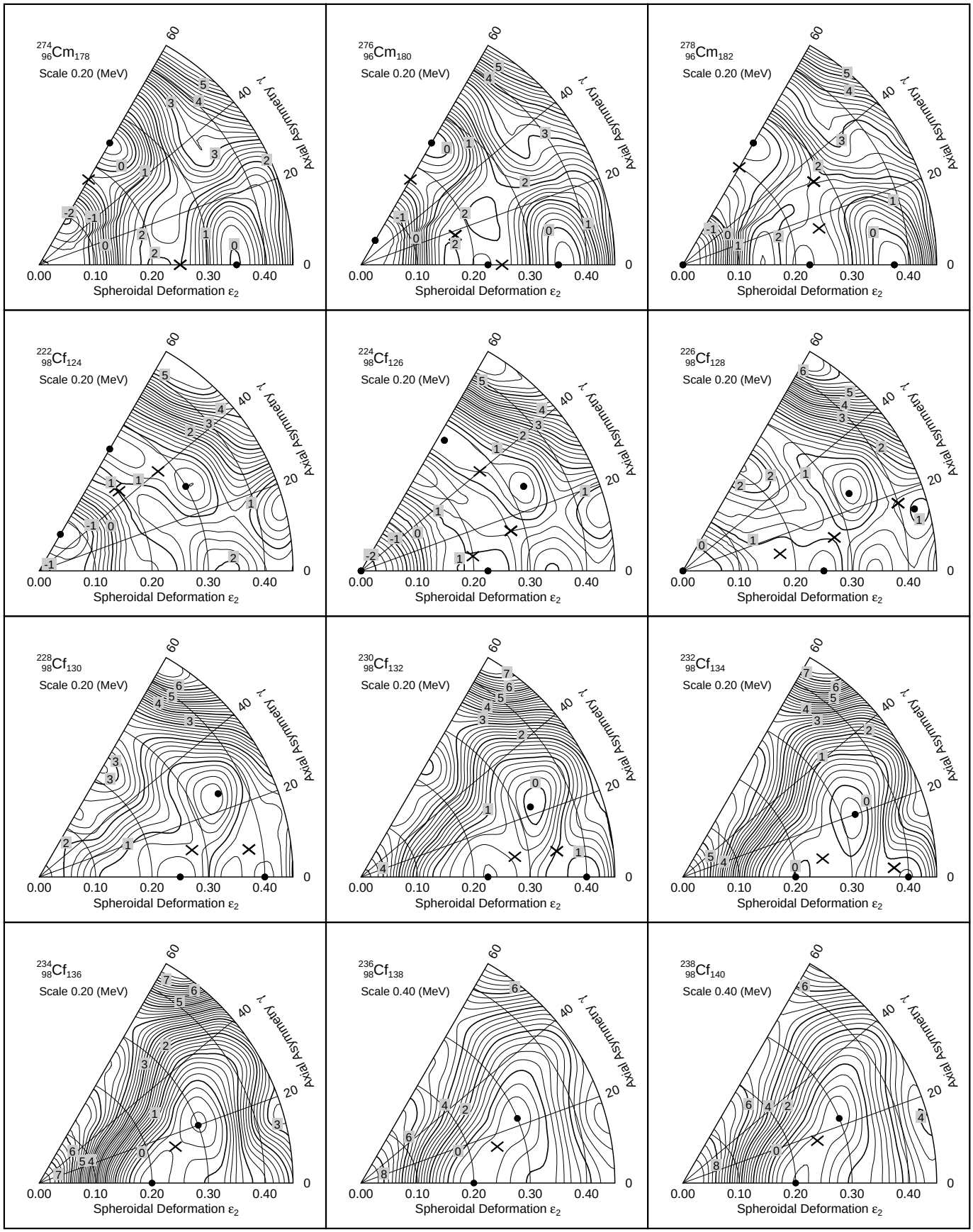
$^{256}_{96}Cm_{160}$ Scale 0.20 (MeV)
$^{258}_{96}Cm_{162}$ Scale 0.20 (MeV)
$^{260}_{96}Cm_{164}$ Scale 0.20 (MeV)
$^{262}_{96}Cm_{166}$ Scale 0.20 (MeV)
$^{264}_{96}Cm_{168}$ Scale 0.20 (MeV)
$^{266}_{96}Cm_{170}$ Scale 0.20 (MeV)
$^{268}_{96}Cm_{172}$ Scale 0.20 (MeV)
$^{270}_{96}Cm_{174}$ Scale 0.20 (MeV)
$^{272}_{96}Cm_{176}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

Graph 94


$^{274}_{96}Cm_{178}$ Scale 0.20 (MeV)
$^{276}_{96}Cm_{180}$ Scale 0.20 (MeV)
$^{278}_{96}Cm_{182}$ Scale 0.20 (MeV)
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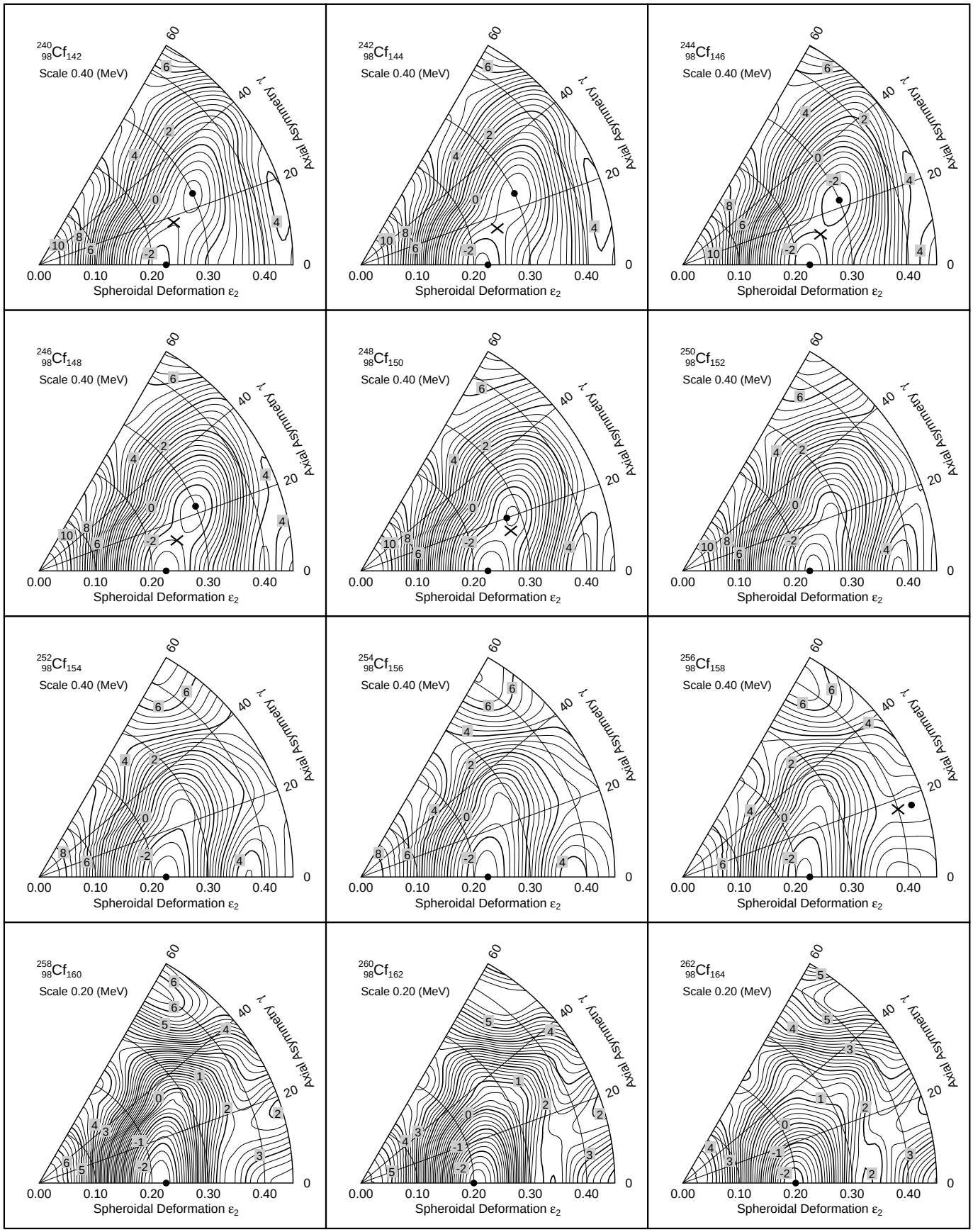
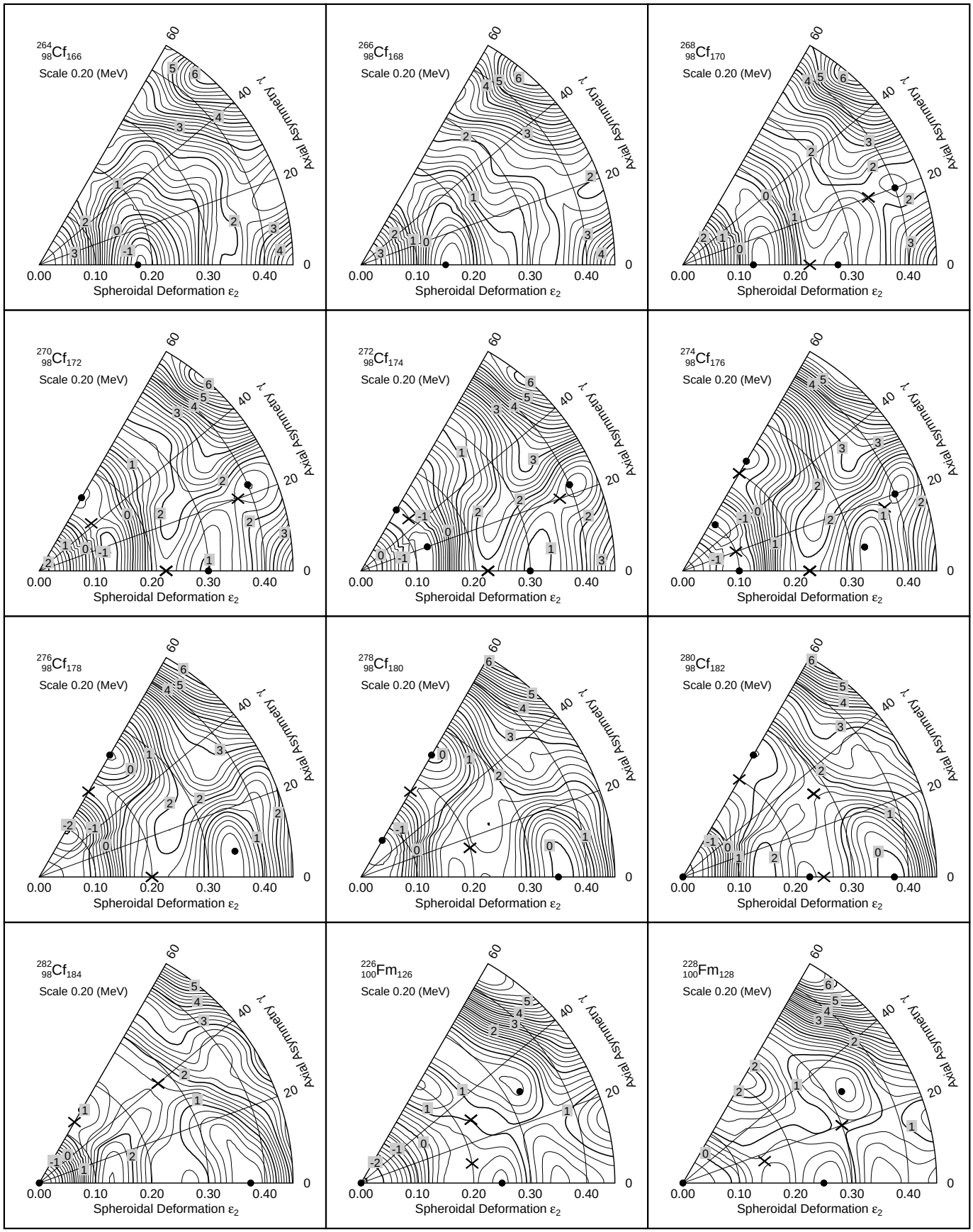
$^{224}_{98}Cf_{126}$ Scale 0.20 (MeV)
$^{226}_{98}Cf_{128}$ Scale 0.20 (MeV)
$^{228}_{98}Cf_{130}$ Scale 0.20 (MeV)
$^{230}_{98}Cf_{132}$ Scale 0.20 (MeV)
$^{232}_{98}Cf_{134}$ Scale 0.20 (MeV)
$^{234}_{98}Cf_{136}$ Scale 0.20 (MeV)
$^{236}_{98}Cf_{138}$ Scale 0.40 (MeV)
$^{238}_{98}Cf_{140}$ Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

Graph 95


$^{240}_{98}Cf_{142}$ Scale 0.40 (MeV)
$^{242}_{98}Cf_{144}$ Scale 0.40 (MeV)
$^{244}_{98}Cf_{146}$ Scale 0.40 (MeV)
$^{246}_{98}Cf_{148}$ Scale 0.40 (MeV)
$^{248}_{98}Cf_{150}$ Scale 0.40 (MeV)
$^{250}_{98}Cf_{152}$ Scale 0.40 (MeV)
$^{252}_{98}Cf_{154}$ Scale 0.40 (MeV)
$^{254}_{98}Cf_{156}$ Scale 0.40 (MeV)
$^{256}_{98}Cf_{158}$ Scale 0.40 (MeV)
$^{258}_{98}Cf_{160}$ Scale 0.20 (MeV)
$^{260}_{98}Cf_{162}$ Scale 0.20 (MeV)
$^{262}_{98}Cf_{164}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

Graph 96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$^{266}_{98}Cf_{168}$
$^{268}_{98}Cf_{170}$
$^{270}_{98}Cf_{172}$
$^{272}_{98}Cf_{174}$
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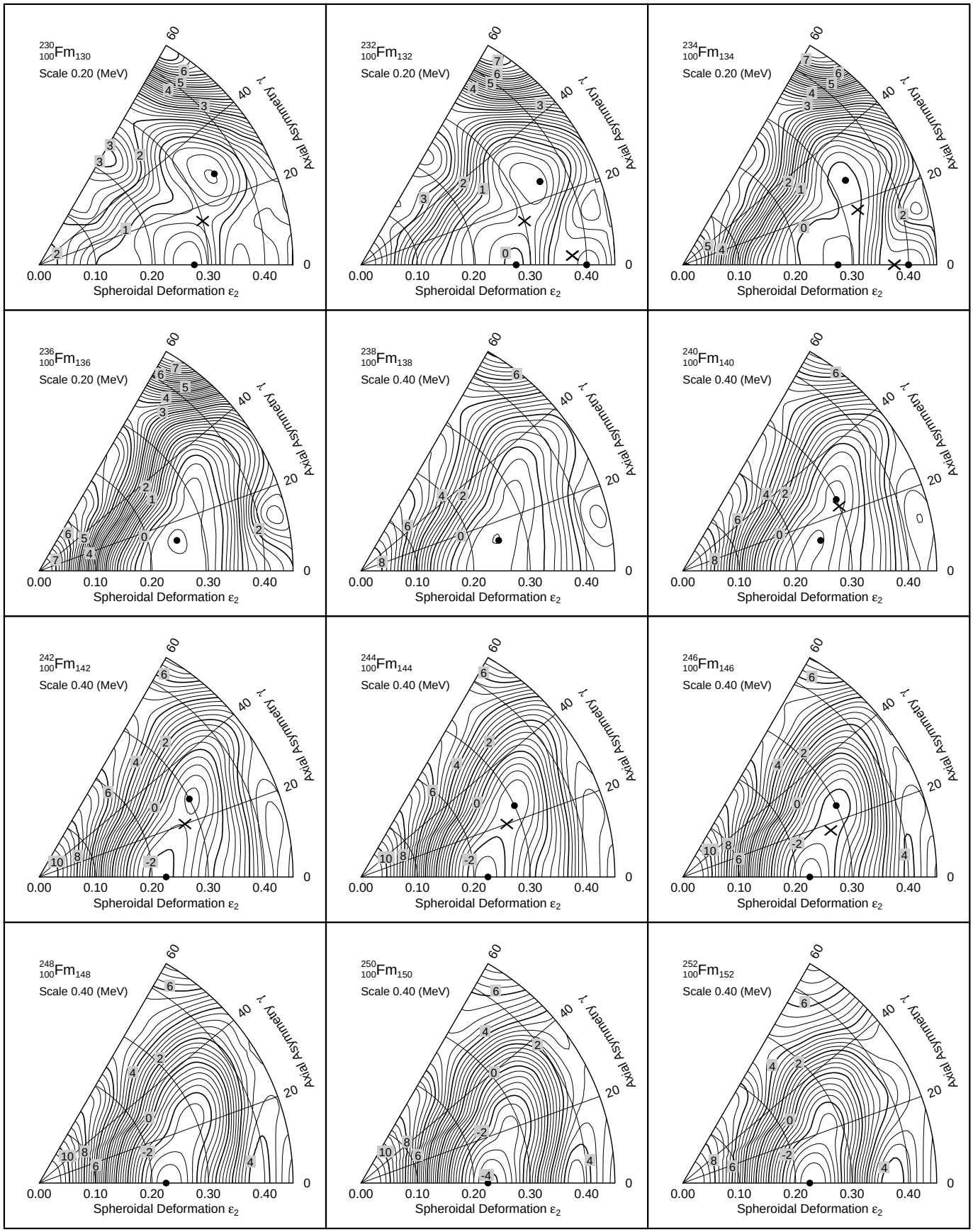
$^{276}_{98}Cf_{178}$
$^{278}_{98}Cf_{180}$
$^{280}_{98}Cf_{182}$
$^{282}_{98}Cf_{184}$
$^{226}_{100}Fm_{126}$
$^{228}_{100}Fm_{128}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

Graph 97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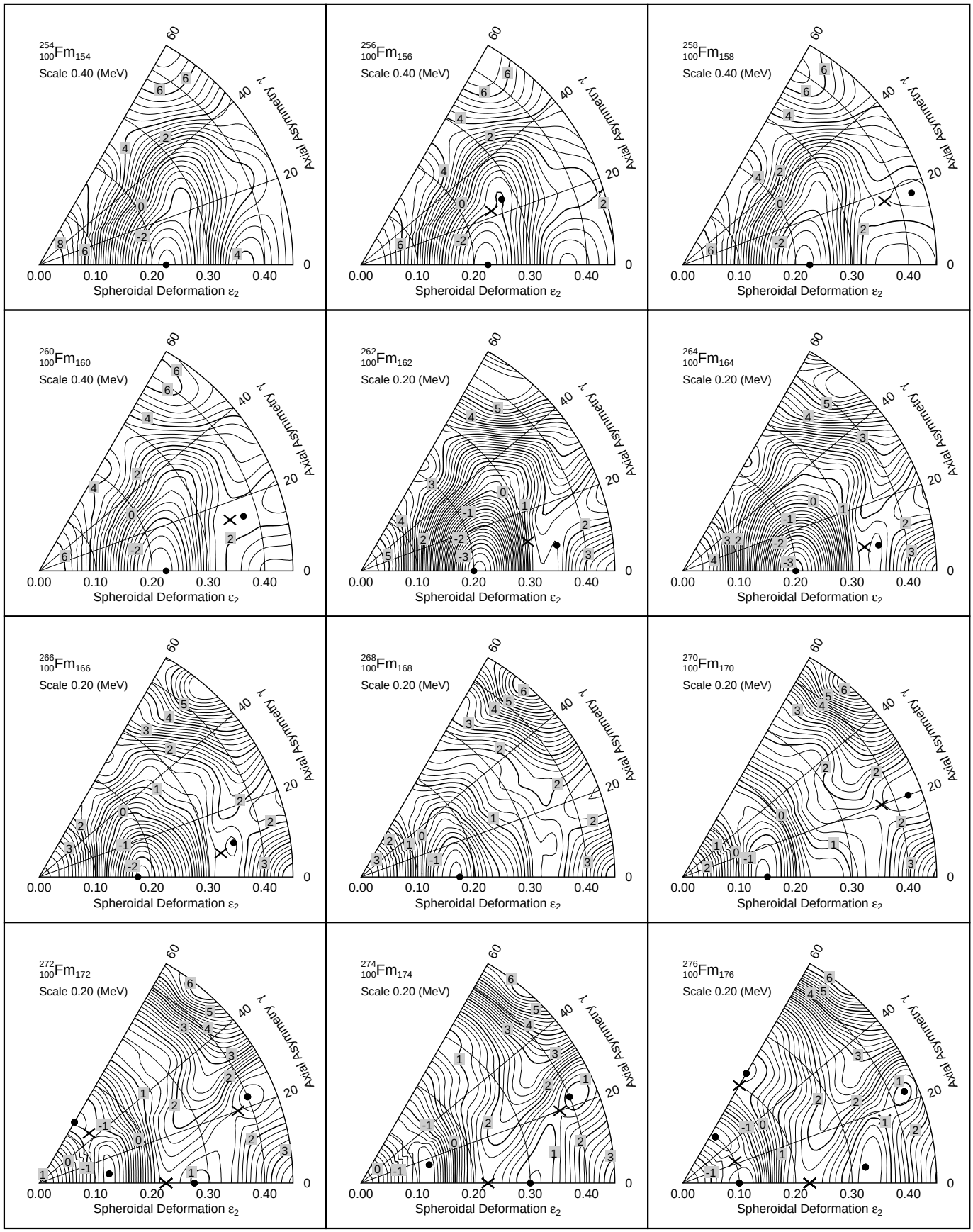
$^{234}_{100}Fm_{134}$ Scale 0.20 (MeV)
$^{236}_{100}Fm_{136}$ Scale 0.20 (MeV)
$^{238}_{100}Fm_{138}$ Scale 0.40 (MeV)
$^{240}_{100}Fm_{140}$ Scale 0.40 (MeV)
$^{242}_{100}Fm_{142}$ Scale 0.40 (MeV)
$^{244}_{100}Fm_{144}$ Scale 0.40 (MeV)
$^{246}_{100}Fm_{146}$ Scale 0.40 (MeV)
$^{248}_{100}Fm_{148}$ Scale 0.40 (MeV)
$^{250}_{100}Fm_{150}$ Scale 0.40 (MeV)
$^{252}_{100}Fm_{152}$ Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

Graph 98


$^{254}_{100}Fm_{154}$ Scale 0.40 (MeV)
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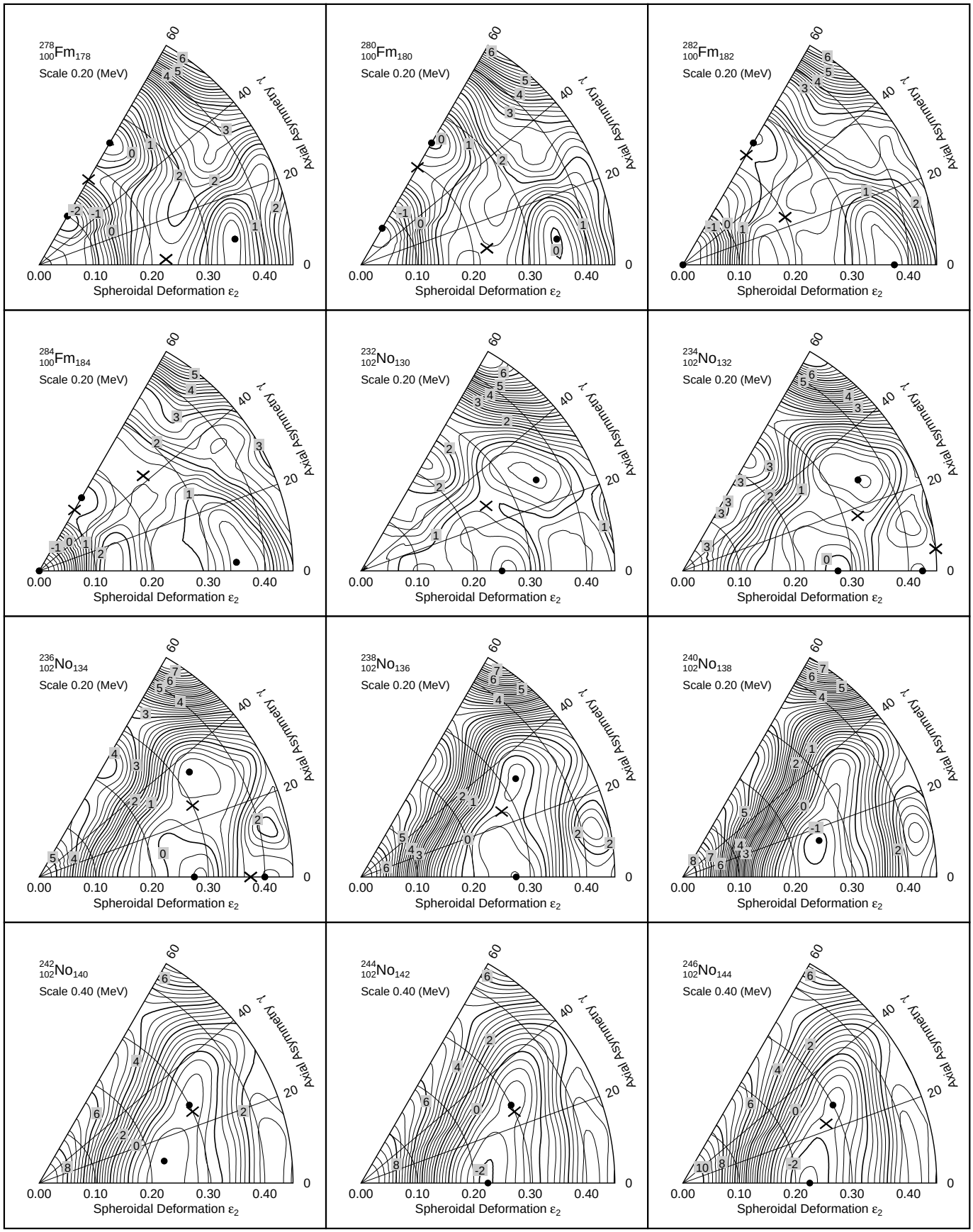
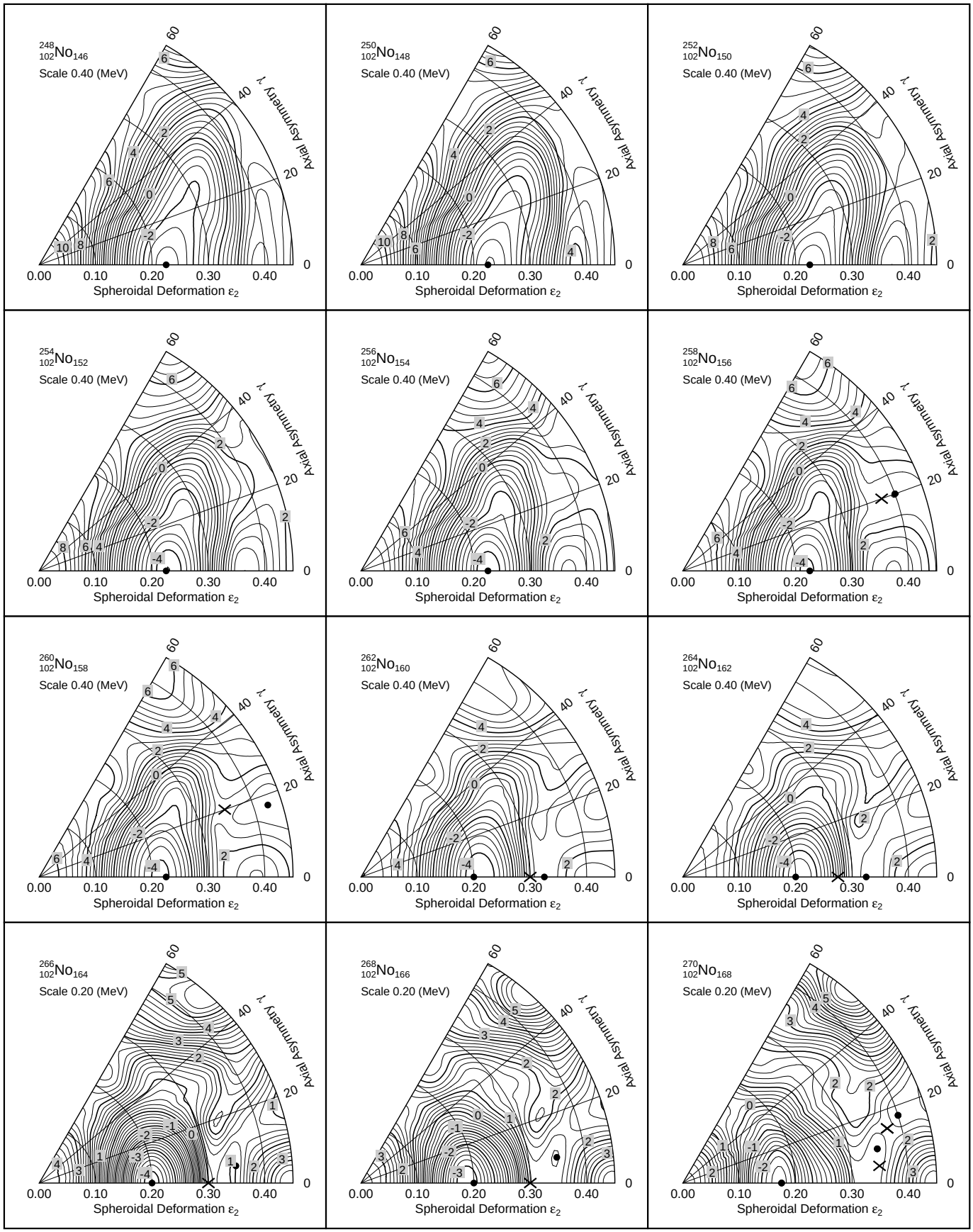
$^{258}_{100}Fm_{158}$ Scale 0.40 (MeV)
$^{260}_{100}Fm_{160}$ Scale 0.40 (MeV)
$^{262}_{100}Fm_{162}$ Scale 0.20 (MeV)
$^{264}_{100}Fm_{164}$ Scale 0.20 (MeV)
$^{266}_{100}Fm_{166}$ Scale 0.20 (MeV)
$^{268}_{100}Fm_{168}$ Scale 0.20 (MeV)
$^{270}_{100}Fm_{170}$ Scale 0.20 (MeV)
$^{272}_{100}Fm_{172}$ Scale 0.20 (MeV)
$^{274}_{100}Fm_{174}$ Scale 0.20 (MeV)
$^{276}_{100}Fm_{176}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

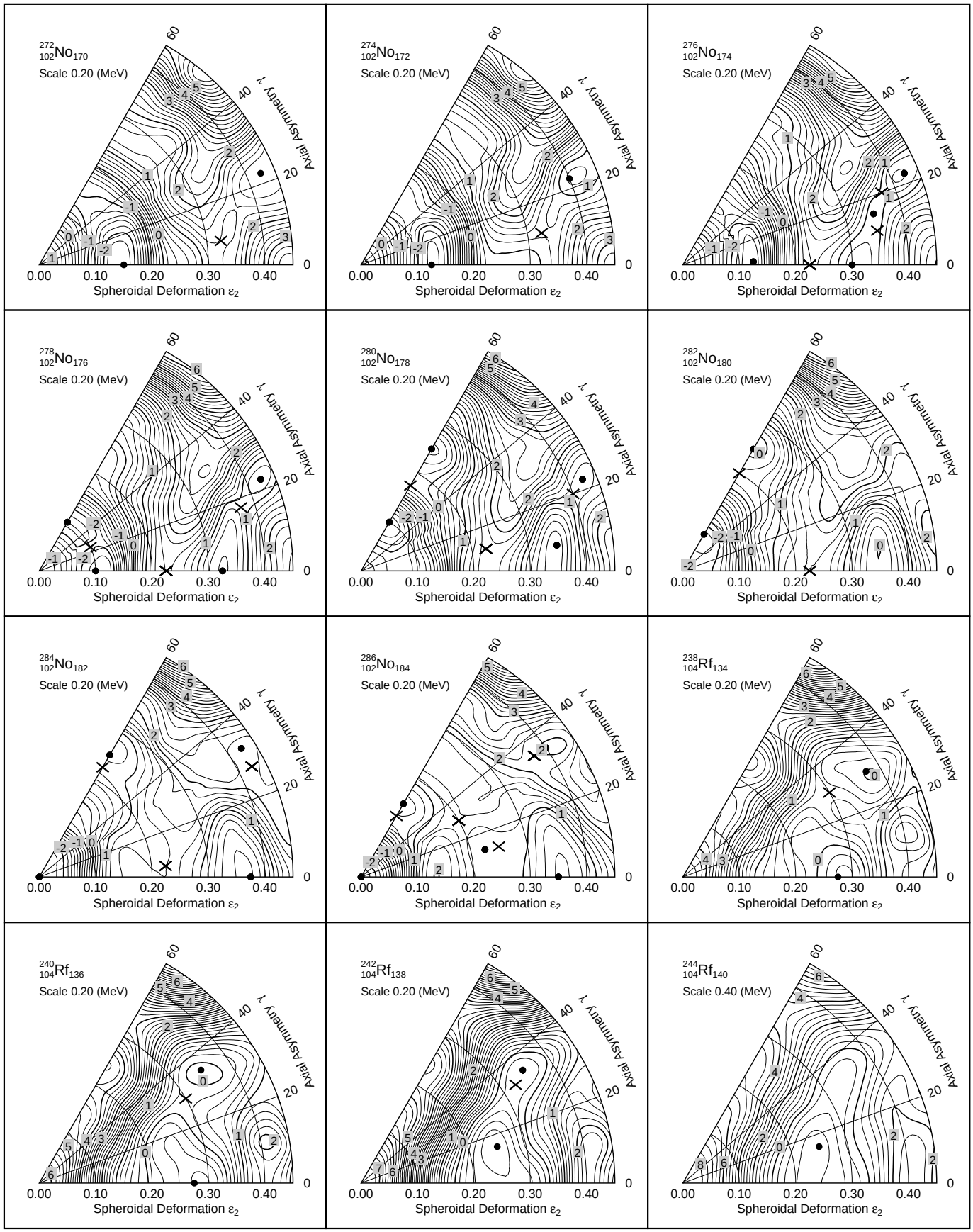
Graph 99


$^{278}_{100}Fm_{178}$ Scale 0.20 (MeV)
$^{280}_{100}Fm_{180}$ Scale 0.20 (MeV)
$^{282}_{100}Fm_{182}$ Scale 0.20 (MeV)
$^{284}_{100}Fm_{184}$ Scale 0.20 (MeV)
$^{232}_{102}No_{130}$ Scale 0.20 (MeV)
$^{234}_{102}No_{132}$ Scale 0.20 (MeV)
$^{236}_{102}No_{134}$ Scale 0.20 (MeV)
$^{238}_{102}No_{136}$ Scale 0.20 (MeV)
$^{240}_{102}No_{138}$ Scale 0.20 (MeV)
$^{242}_{102}No_{140}$ Scale 0.40 (MeV)
$^{244}_{102}No_{142}$ Scale 0.40 (MeV)
$^{246}_{102}No_{144}$ Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

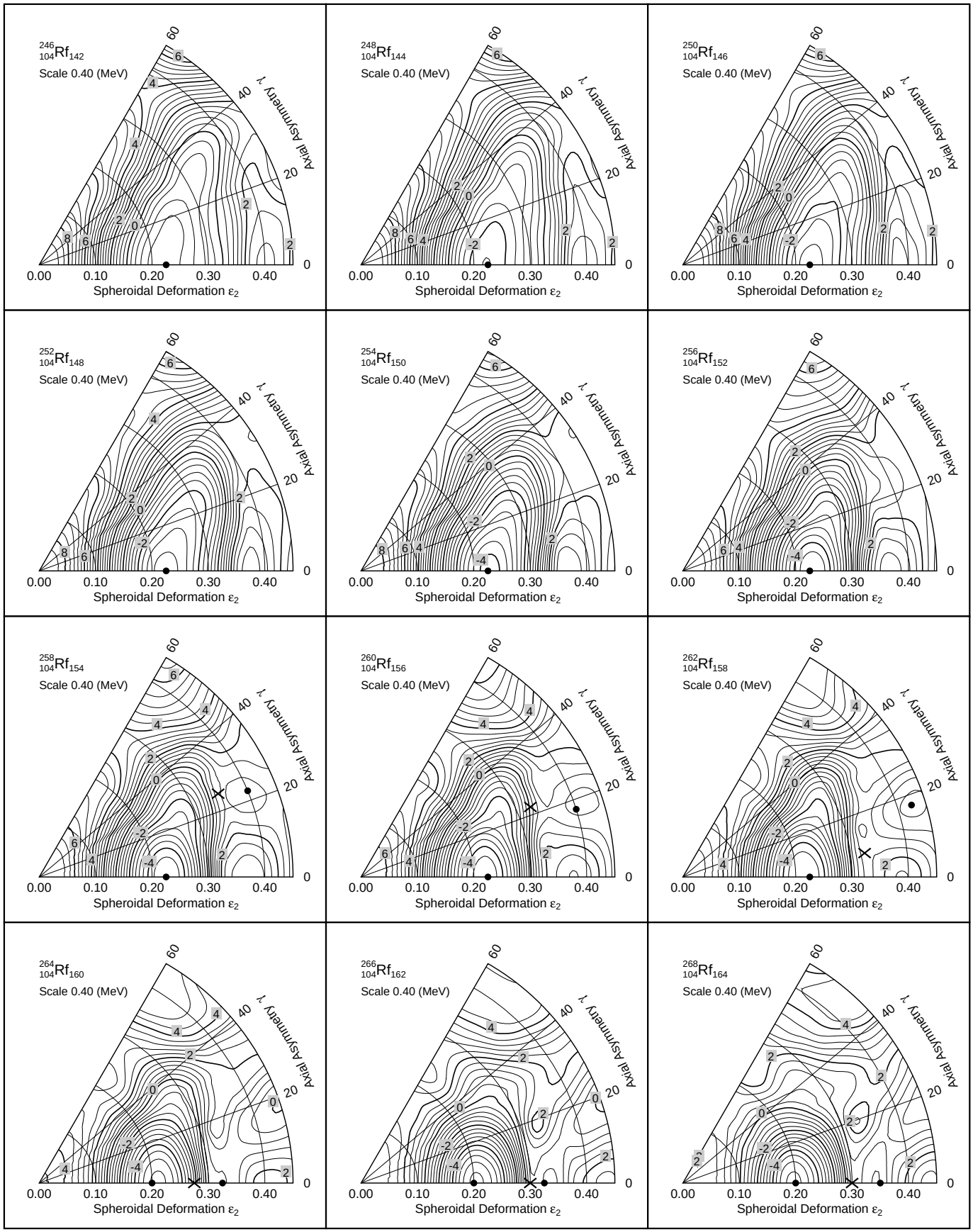
Graph 100


$^{248}_{102}No_{146}$ Scale 0.40 (MeV)
$^{250}_{102}No_{148}$ Scale 0.40 (MeV)
$^{252}_{102}No_{150}$ Scale 0.40 (MeV)
$^{254}_{102}No_{152}$ Scale 0.40 (MeV)
$^{256}_{102}No_{154}$ Scale 0.40 (MeV)
$^{258}_{102}No_{156}$ Scale 0.40 (MeV)
$^{260}_{102}No_{158}$ Scale 0.40 (MeV)
$^{262}_{102}No_{160}$ Scale 0.40 (MeV)
$^{264}_{102}No_{162}$ Scale 0.40 (MeV)
$^{266}_{102}No_{164}$ Scale 0.20 (MeV)
$^{268}_{102}No_{166}$ Scale 0.20 (MeV)
$^{270}_{102}No_{168}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

Graph 101


272 102 No 170
Scale 0.20 (MeV)
274 102 No 172
Scale 0.20 (MeV)
276 102 No 174
Scale 0.20 (MeV)
278 102 No 176
Scale 0.20 (MeV)
280 102 No 178
Scale 0.20 (MeV)
282 102 No 180
Scale 0.20 (MeV)
284 102 No 182
Scale 0.20 (MeV)
286 102 No 184
Scale 0.20 (MeV)
238 104 Rf 134
Scale 0.20 (MeV)
240 104 Rf 136
Scale 0.20 (MeV)
242 104 Rf 138
Scale 0.20 (MeV)
244 104 Rf 140
Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

Graph 102


$^{246}_{104}Rf_{142}$
$^{248}_{104}Rf_{144}$
$^{250}_{104}Rf_{146}$
$^{252}_{104}Rf_{148}$
$^{254}_{104}Rf_{150}$
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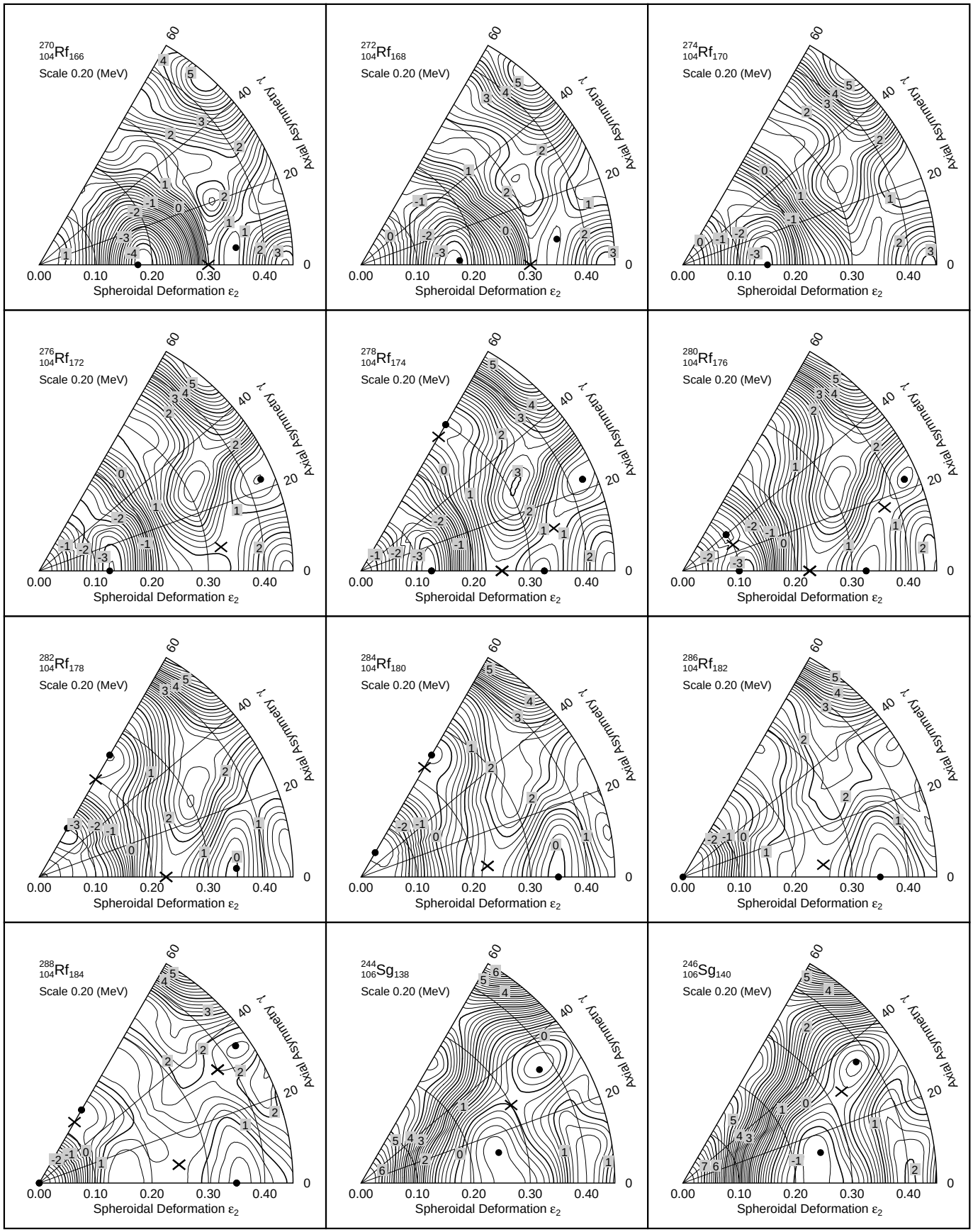
$^{258}_{104}Rf_{154}$
$^{260}_{104}Rf_{156}$
$^{262}_{104}Rf_{158}$
$^{264}_{104}Rf_{160}$
$^{266}_{104}Rf_{162}$
$^{268}_{104}Rf_{164}$
Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

Graph 103


$^{270}_{104}Rf_{166}$
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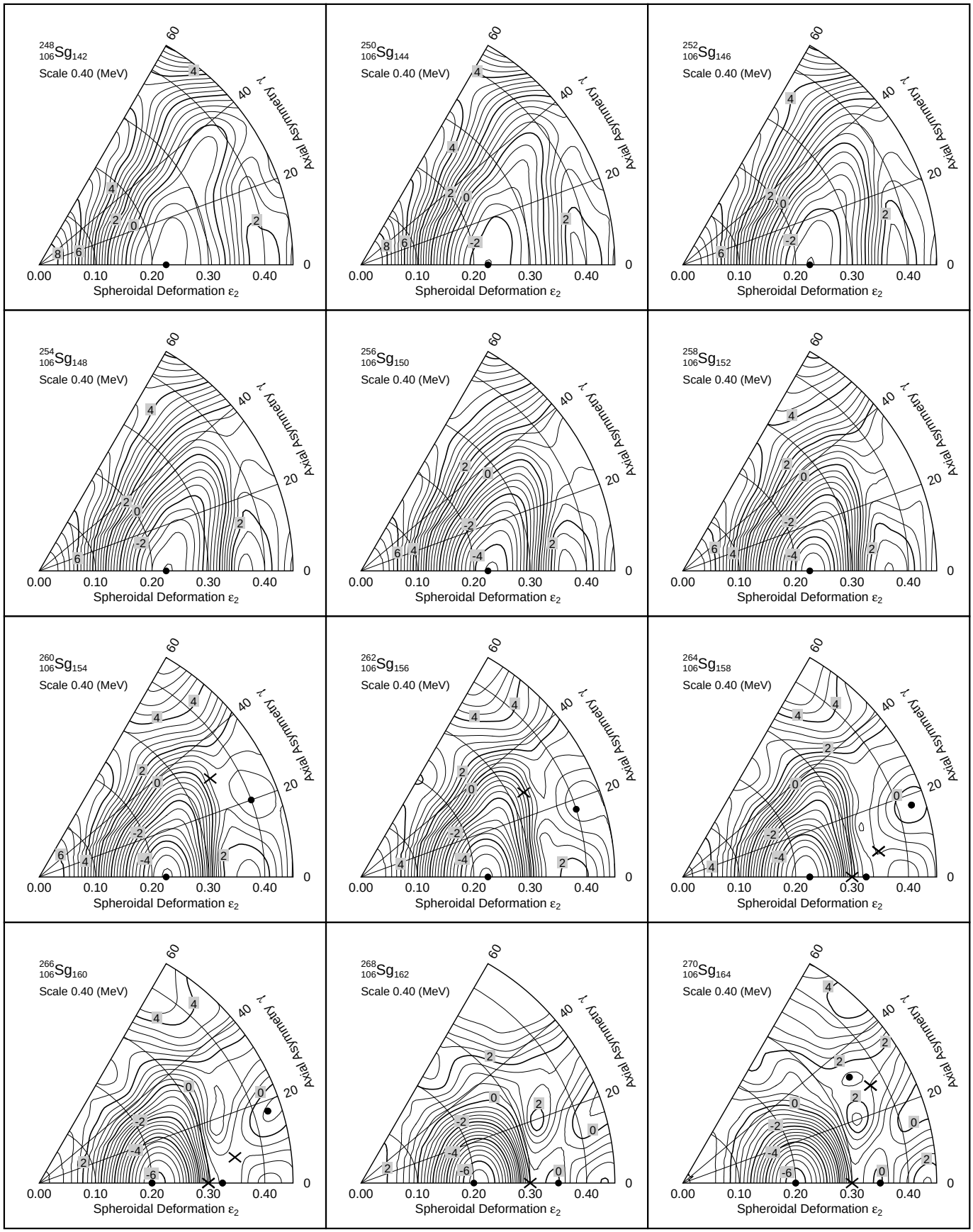
$^{274}_{104}Rf_{170}$
$^{276}_{104}Rf_{172}$
$^{278}_{104}Rf_{174}$
$^{280}_{104}Rf_{176}$
$^{282}_{104}Rf_{178}$
$^{284}_{104}Rf_{180}$
$^{286}_{104}Rf_{182}$
$^{288}_{104}Rf_{184}$
$^{244}_{106}Sg_{138}$
$^{246}_{106}Sg_{140}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

Graph 104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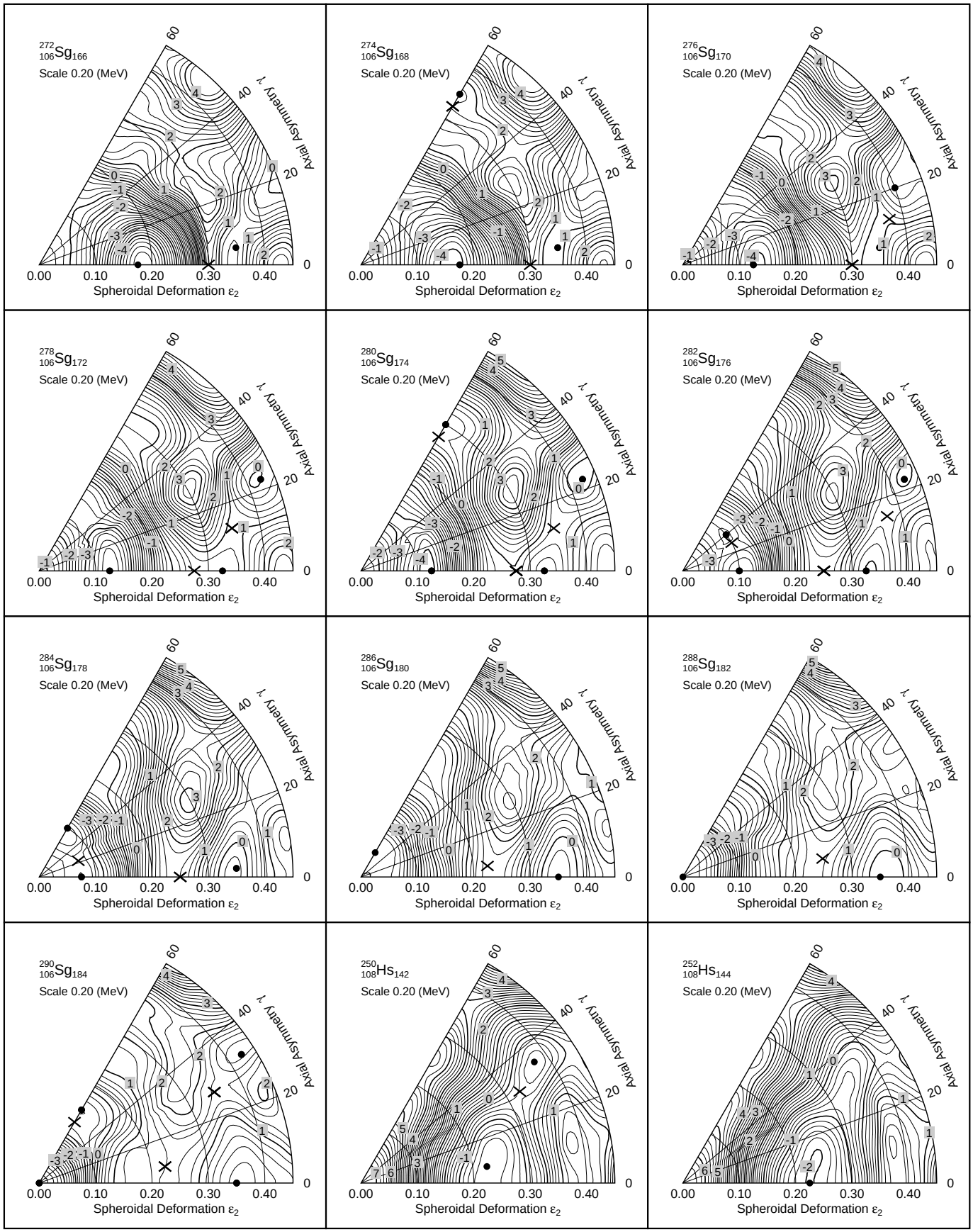
$^{250}_{106}Sg_{144}$
$^{252}_{106}Sg_{146}$
$^{254}_{106}Sg_{148}$
$^{256}_{106}Sg_{150}$
$^{258}_{106}Sg_{152}$
$^{260}_{106}Sg_{154}$
$^{262}_{106}Sg_{156}$
$^{264}_{106}Sg_{158}$
$^{266}_{106}Sg_{160}$
$^{268}_{106}Sg_{162}$
$^{270}_{106}Sg_{164}$
Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

Graph 105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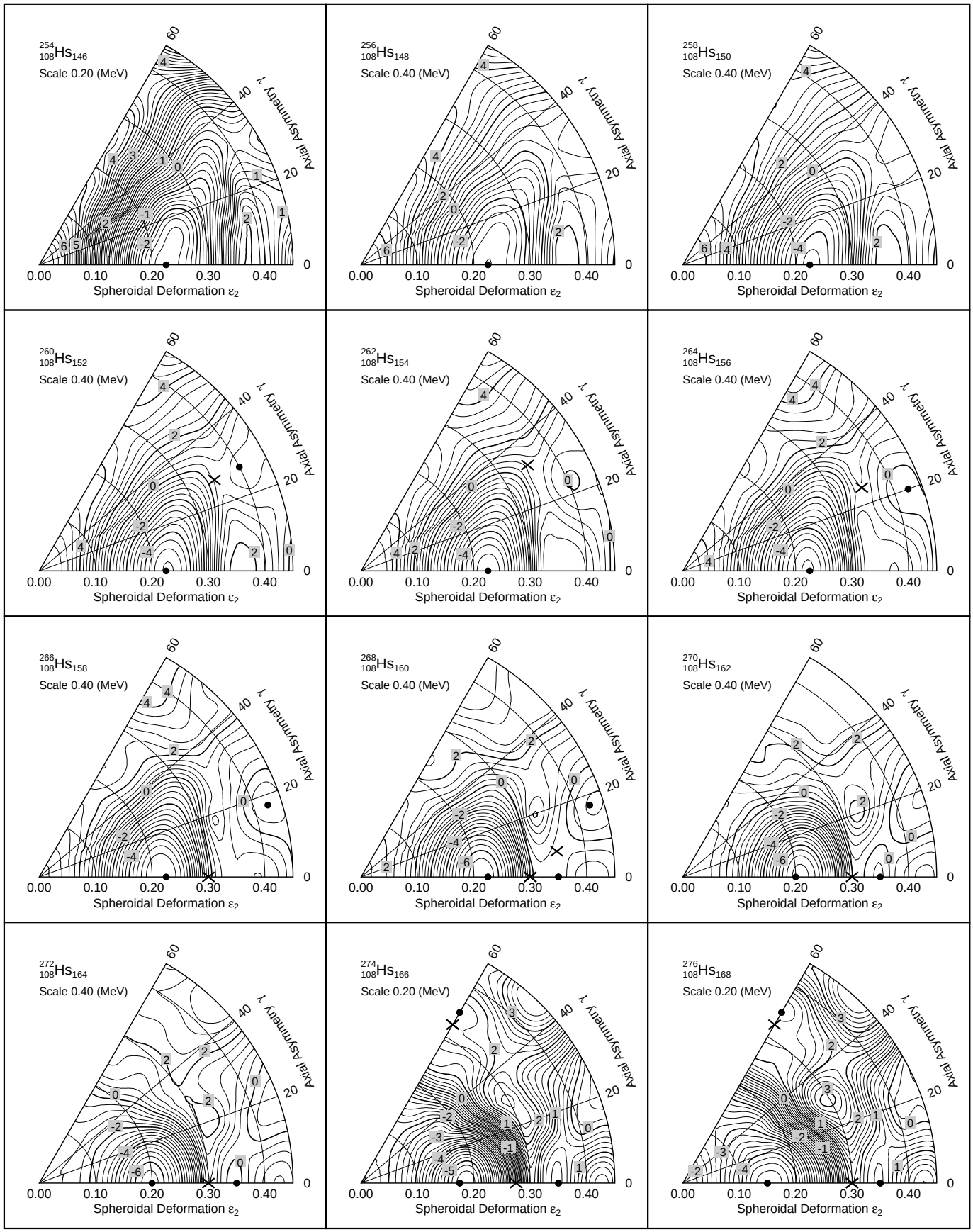
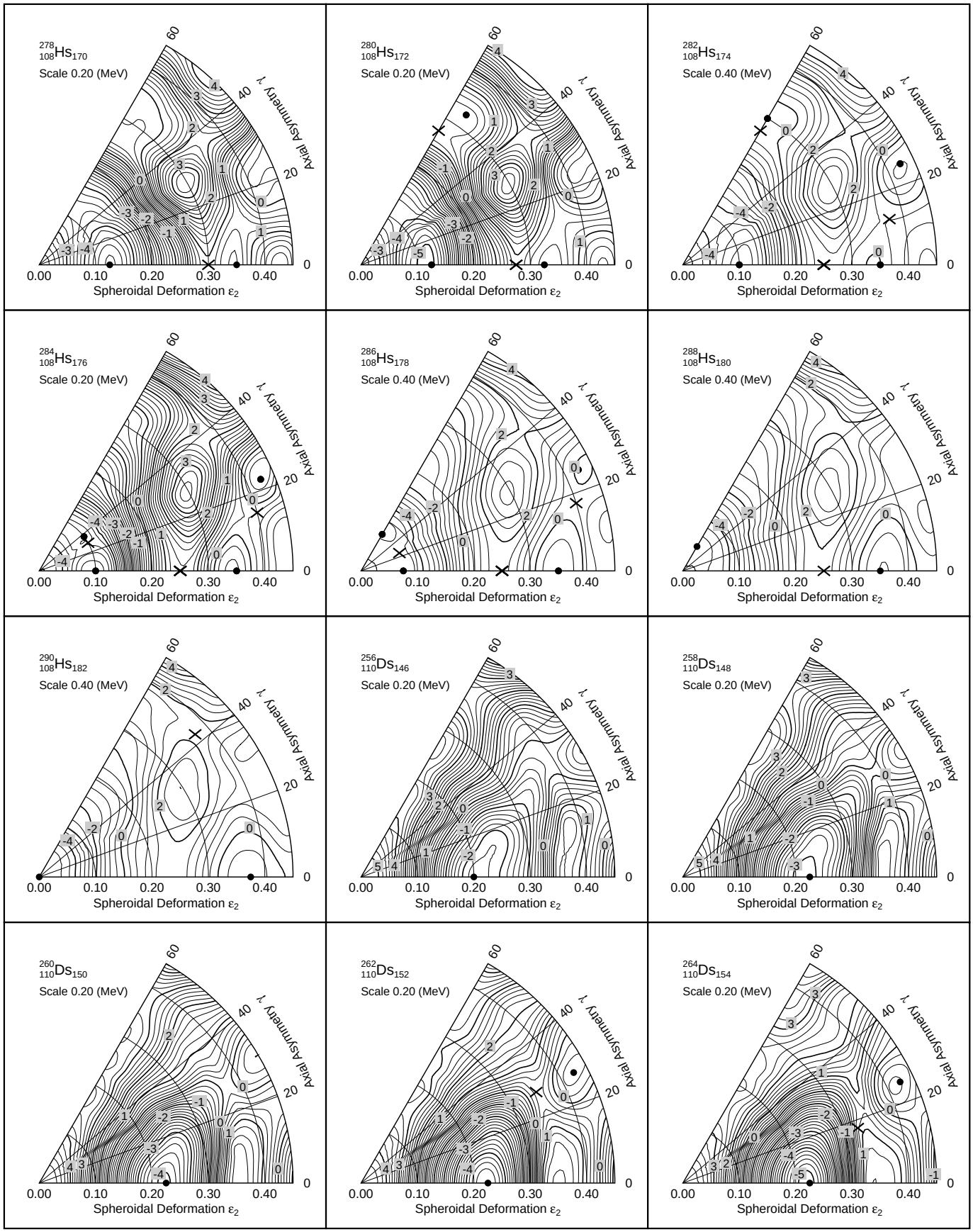
$^{274}_{106}Sg_{168}$
$^{276}_{106}Sg_{170}$
$^{278}_{106}Sg_{172}$
$^{280}_{106}Sg_{174}$
$^{282}_{106}Sg_{176}$
$^{284}_{106}Sg_{178}$
$^{286}_{106}Sg_{180}$
$^{288}_{106}Sg_{182}$
$^{290}_{106}Sg_{184}$
$^{250}_{108}Hs_{142}$
$^{252}_{108}Hs_{144}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

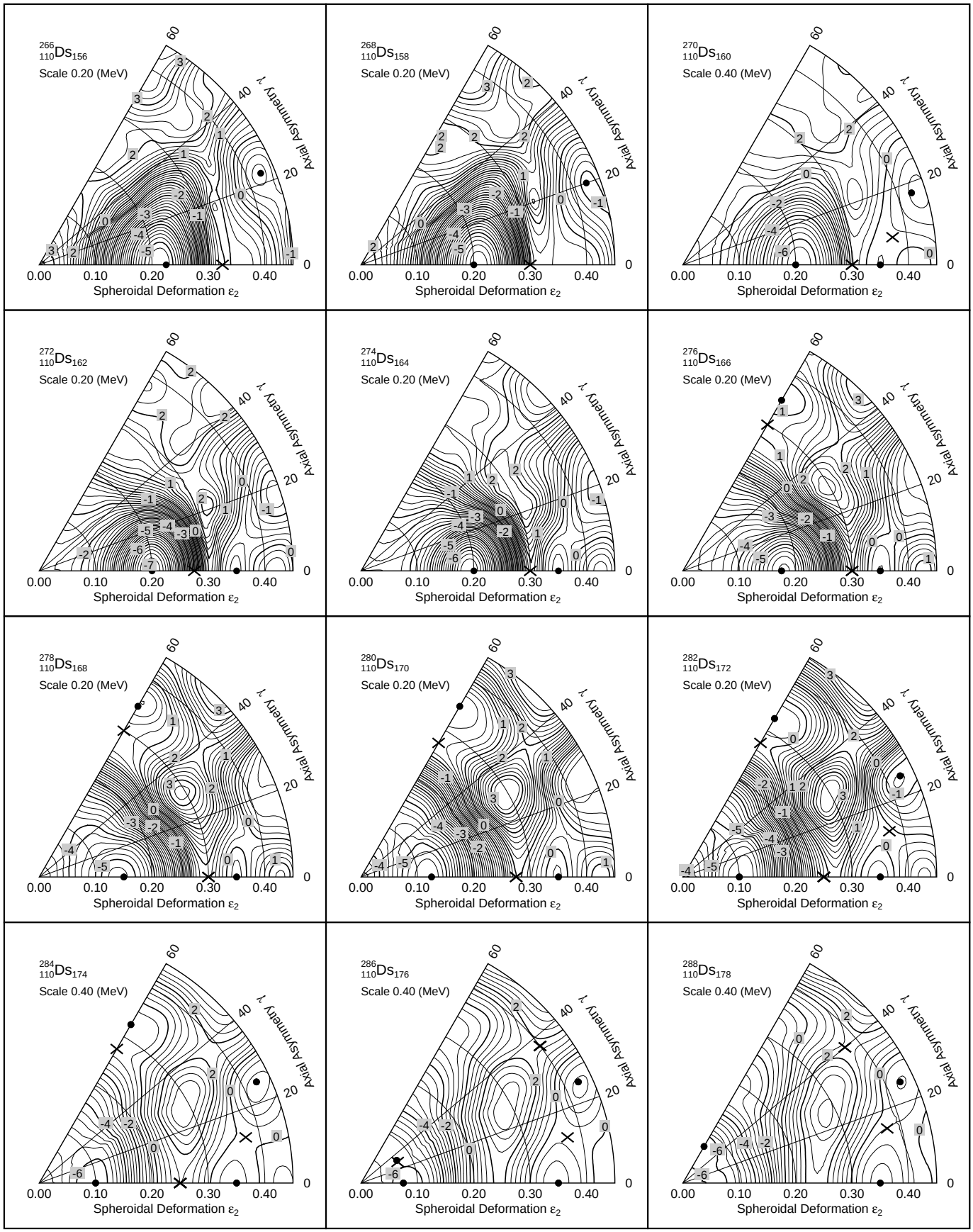
Graph 106


$^{254}_{108}Hs_{146}$
Scale 0.20 (MeV)
$^{256}_{108}Hs_{148}$
Scale 0.40 (MeV)
$^{258}_{108}Hs_{150}$
Scale 0.40 (MeV)
$^{260}_{108}Hs_{152}$
Scale 0.40 (MeV)
$^{262}_{108}Hs_{154}$
Scale 0.40 (MeV)
$^{264}_{108}Hs_{156}$
Scale 0.40 (MeV)
$^{266}_{108}Hs_{158}$
Scale 0.40 (MeV)
$^{268}_{108}Hs_{160}$
Scale 0.40 (MeV)
$^{270}_{108}Hs_{162}$
Scale 0.40 (MeV)
$^{272}_{108}Hs_{164}$
Scale 0.40 (MeV)
$^{274}_{108}Hs_{166}$
Scale 0.20 (MeV)
$^{276}_{108}Hs_{168}$
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

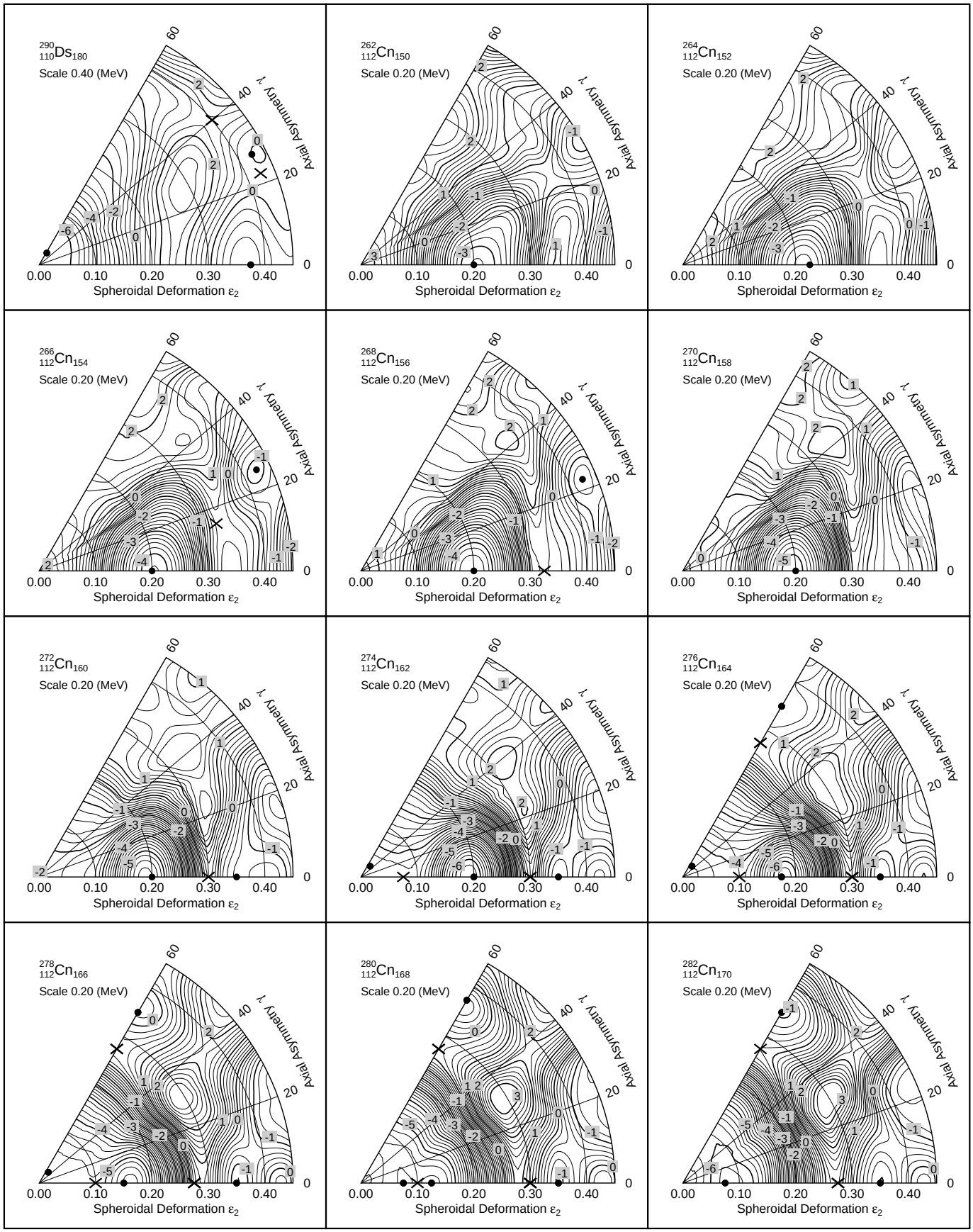
Graph 107


$^{278}_{108}Hs_{170}$ Scale 0.20 (MeV)
$^{280}_{108}Hs_{172}$ Scale 0.20 (MeV)
$^{282}_{108}Hs_{174}$ Scale 0.40 (MeV)
$^{284}_{108}Hs_{176}$ Scale 0.20 (MeV)
$^{286}_{108}Hs_{178}$ Scale 0.40 (MeV)
$^{288}_{108}Hs_{180}$ Scale 0.40 (MeV)
$^{290}_{108}Hs_{182}$ Scale 0.40 (MeV)
$^{256}_{110}Ds_{146}$ Scale 0.20 (MeV)
$^{258}_{110}Ds_{148}$ Scale 0.20 (MeV)
$^{260}_{110}Ds_{150}$ Scale 0.20 (MeV)
$^{262}_{110}Ds_{152}$ Scale 0.20 (MeV)
$^{264}_{110}Ds_{154}$ Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

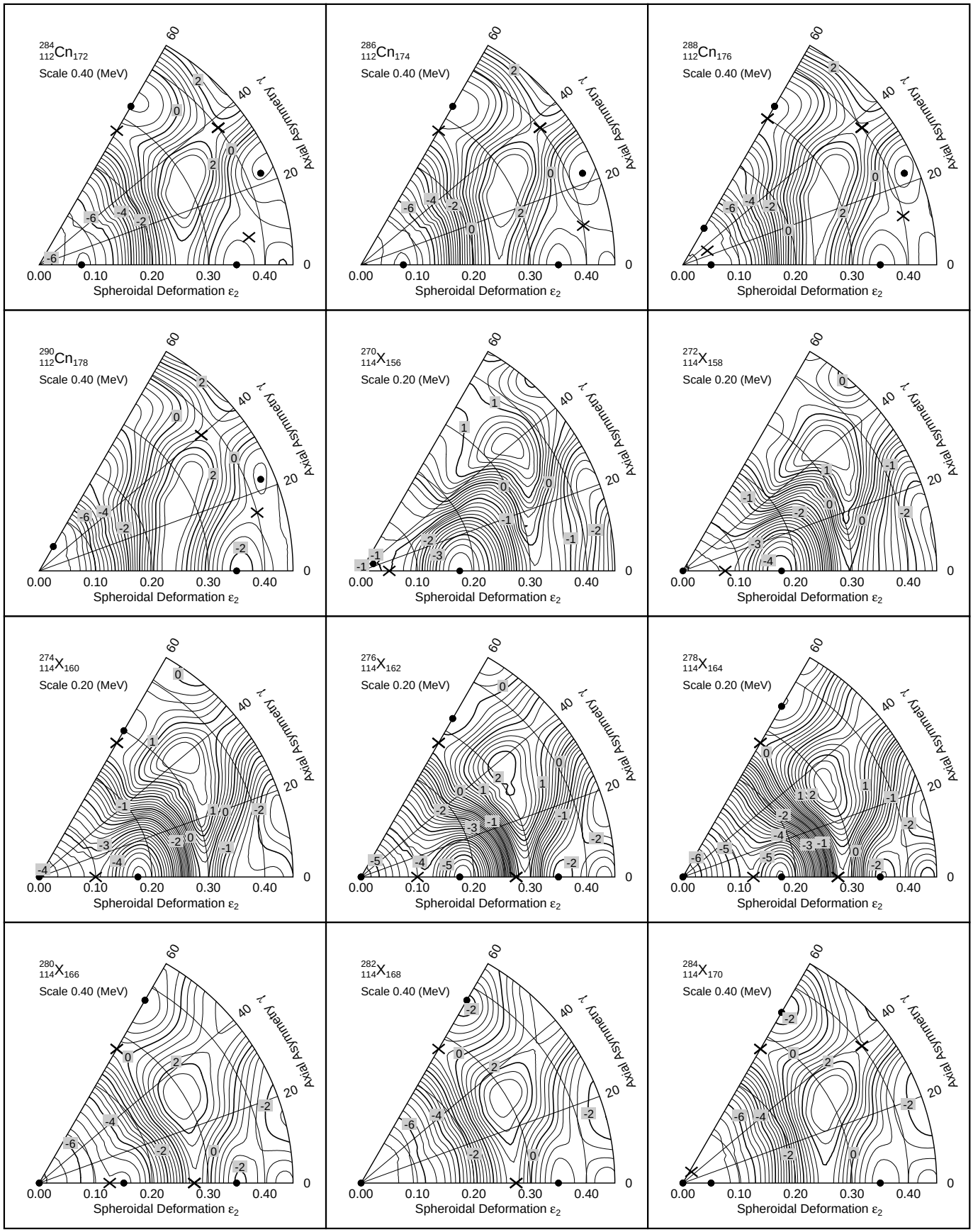
Graph 108


$^{266}_{110}Ds_{156}$
Scale 0.20 (MeV)
$^{268}_{110}Ds_{158}$
Scale 0.20 (MeV)
$^{270}_{110}Ds_{160}$
Scale 0.40 (MeV)
$^{272}_{110}Ds_{162}$
Scale 0.20 (MeV)
$^{274}_{110}Ds_{164}$
Scale 0.20 (MeV)
$^{276}_{110}Ds_{166}$
Scale 0.20 (MeV)
$^{278}_{110}Ds_{168}$
Scale 0.20 (MeV)
$^{280}_{110}Ds_{170}$
Scale 0.20 (MeV)
$^{282}_{110}Ds_{172}$
Scale 0.20 (MeV)
$^{284}_{110}Ds_{174}$
Scale 0.40 (MeV)
$^{286}_{110}Ds_{176}$
Scale 0.40 (MeV)
$^{288}_{110}Ds_{178}$
Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

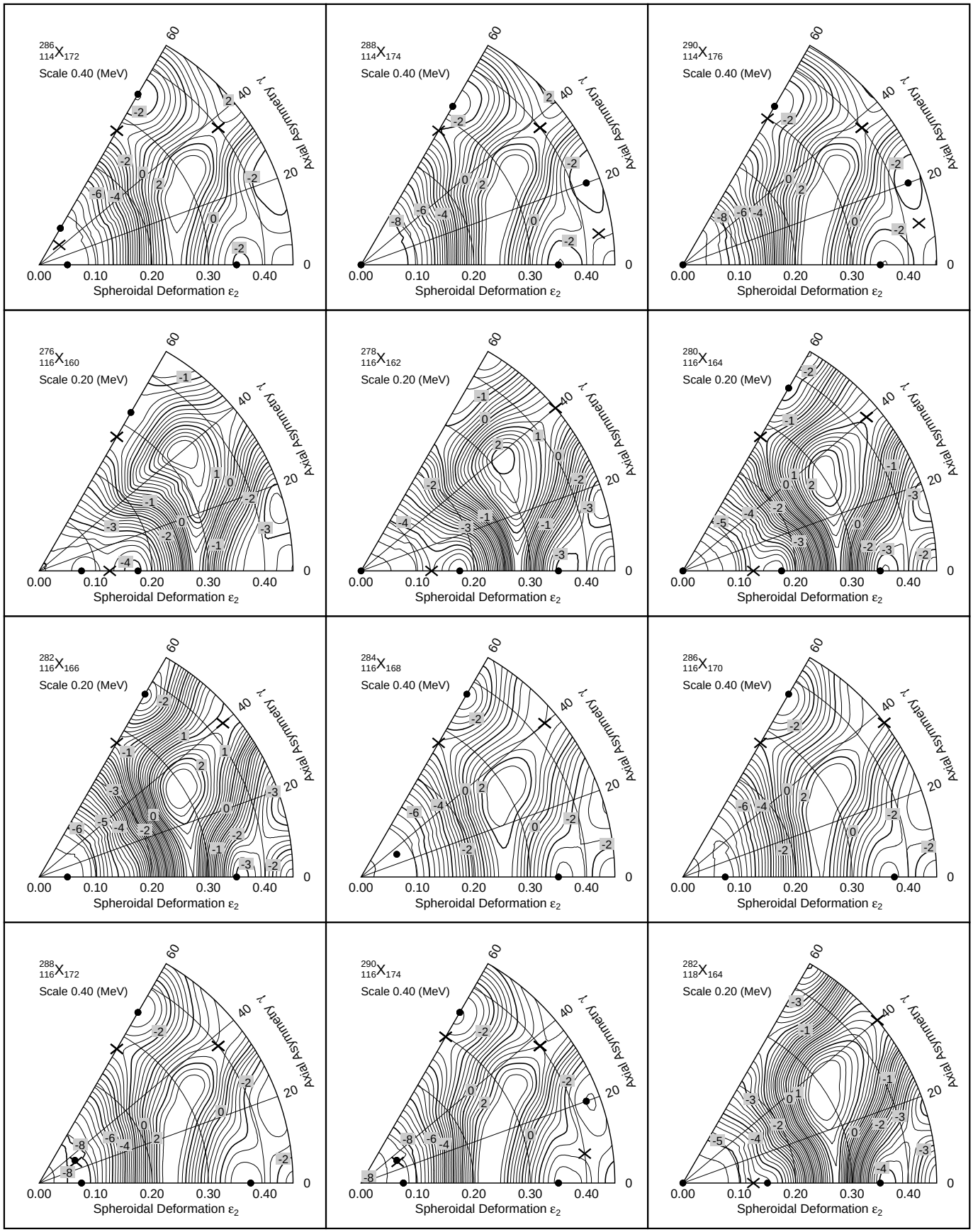
Graph 109


$^{290}_{110}Ds_{180}$
$^{262}_{112}Cn_{150}$
$^{264}_{112}Cn_{152}$
$^{266}_{112}Cn_{154}$
$^{268}_{112}Cn_{156}$
$^{270}_{112}Cn_{158}$
$^{272}_{112}Cn_{160}$
$^{274}_{112}Cn_{162}$
$^{276}_{112}Cn_{164}$
$^{278}_{112}Cn_{166}$
$^{280}_{112}Cn_{168}$
$^{282}_{112}Cn_{170}$
Scale 0.40 (MeV)
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

Graph 110


$^{284}_{112}Cn_{172}$ Scale 0.40 (MeV)
$^{286}_{112}Cn_{174}$ Scale 0.40 (MeV)
$^{288}_{112}Cn_{176}$ Scale 0.40 (MeV)
$^{290}_{112}Cn_{178}$ Scale 0.40 (MeV)
$^{270}_{114}X_{156}$ Scale 0.20 (MeV)
$^{272}_{114}X_{158}$ Scale 0.20 (MeV)
$^{274}_{114}X_{160}$ Scale 0.20 (MeV)
$^{276}_{114}X_{162}$ Scale 0.20 (MeV)
$^{278}_{114}X_{164}$ Scale 0.20 (MeV)
$^{280}_{114}X_{166}$ Scale 0.40 (MeV)
$^{282}_{114}X_{168}$ Scale 0.40 (MeV)
$^{284}_{114}X_{170}$ Scale 0.40 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε_2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

Graph 111


286 114 X 172
Scale 0.40 (MeV)
288 114 X 174
Scale 0.40 (MeV)
290 114 X 176
Scale 0.40 (MeV)
276 116 X 160
Scale 0.20 (MeV)
278 116 X 162
Scale 0.20 (MeV)
280 116 X 164
Scale 0.20 (MeV)
282 116 X 166
Scale 0.20 (MeV)
284 116 X 168
Scale 0.40 (MeV)
286 116 X 170
Scale 0.40 (MeV)
288 116 X 172
Scale 0.40 (MeV)
290 116 X 174
Scale 0.40 (MeV)
282 118 X 164
Scale 0.20 (MeV)
Axial Asymmetry γ
Spheroidal Deformation ε2
0.00 0.10 0.20 0.30 0.40
0 20 40 60

Graph 112

EXPLANATION OF TABLE

Table Calculated energies and deformations of potential-energy-surface minima and saddles.

Z	Proton number. The table is ordered by increasing proton number. The corresponding chemical symbol of each named element is given in parentheses.
N	Neutron number.
A	Mass number.
ϵ_2	Calculated quadrupole deformation in the Nilsson perturbed-spheroid parameterization of minimum or saddle.
ϵ_4	Calculated hexadecapole deformation in the Nilsson perturbed-spheroid parameterization of minimum or saddle.
γ	Calculated gamma deformation in the Nilsson perturbed-spheroid parameterization of minimum or saddle.
E	Calculated energy of minimum or saddle.
$E_{\rm sad}$	Saddle height relative to the higher of the two minima.

We only present nuclei for which we have found two or more minima. Furthermore we discard all minima that are less than 0.2 MeV deep. Minima of nuclei where only one minimum occurs are tabulated in Ref. [1] except if the minimum is axially asymmetric, then it is tabulated in Ref. [10].

In the table we present each pair of minima and the saddle separating them on one line. So if there are three minima in the surface there will be 3 pairs tabulated, if there are 4 there will be 6 pairs tabulated. In the deformation space we investigate here the maximum number of minima deeper than 0.2 MeV that we find is 4, as is seen in GRAPH 5.

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Table

Calculated energies and deformations of potential-energy-surface minima and saddles. See page 125 for explanation of Table.

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 9$ (F)														
25	34	0.275	−0.08	32.5	−0.12	0.200	−0.12	30.0	0.09	0.225	−0.04	2.5	−0.24	0.20
27	36	0.350	0.12	0.0	−0.70	0.325	0.10	0.0	−0.32	0.275	−0.08	47.5	−0.72	0.38
28	37	0.350	0.12	0.0	−0.83	0.325	0.12	0.0	−0.43	0.275	−0.10	60.0	−1.27	0.40
$Z = 10$ (Ne)														
27	37	0.275	−0.08	35.0	−0.58	0.225	−0.10	30.0	−0.25	0.350	0.12	0.0	−0.95	0.33
28	38	0.350	0.12	0.0	−1.07	0.225	−0.02	17.5	−0.36	0.300	−0.12	60.0	−1.13	0.70
31	41	0.425	−0.06	2.5	−0.33	0.350	−0.08	17.5	0.13	0.125	0.04	47.5	−1.05	0.46
$Z = 11$ (Na)														
20	31	0.350	−0.06	2.5	2.65	0.325	−0.04	2.5	2.90	0.000	0.00	0.0	1.39	0.25
26	37	0.275	−0.08	32.5	0.54	0.275	−0.06	30.0	0.76	0.375	0.04	0.0	0.24	0.22
27	38	0.275	−0.06	32.5	0.23	0.250	−0.06	30.0	0.54	0.350	0.12	0.0	−0.38	0.31
28	39	0.300	−0.12	57.5	−0.25	0.225	−0.04	25.0	0.41	0.350	0.12	0.0	−0.53	0.67
32	43	0.425	−0.04	0.0	0.67	0.325	−0.06	17.5	0.89	0.225	0.02	25.0	0.11	0.23
$Z = 12$ (Mg)														
25	37	0.275	−0.08	32.5	0.75	0.275	−0.06	30.0	0.95	0.275	0.02	0.0	0.43	0.20
26	38	0.275	−0.06	32.5	0.42	0.275	−0.06	30.0	0.63	0.300	0.04	0.0	0.17	0.21
27	39	0.275	−0.08	40.0	0.09	0.250	−0.04	27.5	0.43	0.350	0.12	0.0	−0.54	0.34
28	40	0.325	−0.12	60.0	−0.69	0.225	−0.02	22.5	0.30	0.350	0.12	0.0	−0.70	1.00
29	41	0.350	0.12	0.0	−0.28	0.250	0.04	12.5	0.01	0.275	−0.10	60.0	−0.40	0.29
$Z = 13$ (Al)														
25	38	0.275	−0.08	32.5	1.16	0.250	−0.06	30.0	1.43	0.250	0.00	0.0	1.11	0.27
26	39	0.250	0.02	0.0	0.83	0.250	−0.06	30.0	1.03	0.275	−0.06	32.5	0.79	0.20
27	40	0.350	0.12	0.0	0.44	0.200	0.02	15.0	0.76	0.300	−0.10	47.5	0.16	0.33
28	41	0.350	0.12	0.0	0.24	0.250	0.06	0.0	0.67	0.325	−0.12	57.5	−0.70	0.44
$Z = 14$ (Si)														
28	42	0.350	0.12	0.0	0.42	0.250	0.08	0.0	0.63	0.325	−0.12	60.0	−1.37	0.22
38	52	0.400	0.04	60.0	1.45	0.375	0.00	32.5	1.94	0.400	0.10	0.0	1.48	0.46
$Z = 16$ (S)														
40	56	0.350	0.08	30.0	1.74	0.300	0.08	32.5	1.98	0.225	0.10	60.0	1.74	0.24
$Z = 17$ (Cl)														
37	54	0.375	0.04	0.0	3.44	0.300	0.06	12.5	3.68	0.225	0.10	55.0	1.76	0.24
38	55	0.375	0.04	0.0	3.07	0.300	0.06	15.0	3.38	0.225	0.10	57.5	1.80	0.30
41	58	0.225	0.04	30.0	1.94	0.275	0.06	32.5	2.14	0.250	0.10	57.5	1.68	0.21
42	59	0.275	0.06	30.0	1.62	0.275	0.06	32.5	1.88	0.250	0.10	55.0	1.55	0.26
$Z = 18$ (Ar)														
37	55	0.400	0.02	0.0	3.68	0.375	0.04	27.5	4.13	0.225	0.10	60.0	1.62	0.45
38	56	0.400	0.02	0.0	3.35	0.350	0.04	25.0	3.85	0.200	0.10	60.0	1.60	0.50
$Z = 19$ (K)														
12	31	0.375	−0.02	17.5	1.65	0.350	0.02	30.0	1.92	0.050	0.00	42.5	0.67	0.27
37	56	0.400	0.02	5.0	4.39	0.375	0.02	30.0	4.68	0.125	0.04	60.0	2.20	0.29
38	57	0.425	0.04	0.0	3.99	0.375	0.02	27.5	4.46	0.125	0.06	60.0	2.01	0.46
39	58	0.425	0.06	0.0	3.94	0.375	0.02	27.5	4.19	0.050	0.02	60.0	2.05	0.25
$Z = 20$ (Ca)														
11	31	0.350	−0.08	5.0	0.60	0.225	−0.08	0.0	1.37	0.000	0.00	0.0	0.09	0.77
12	32	0.425	0.00	32.5	1.20	0.300	−0.02	32.5	1.41	0.000	0.00	0.0	−0.02	0.21
$Z = 21$ (Sc)														
12	33	0.350	−0.06	2.5	0.55	0.325	−0.08	12.5	0.88	0.100	−0.06	0.0	0.39	0.33

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 21$ (Sc)														
21	42	0.425	0.02	32.5	5.34	0.325	0.02	32.5	5.62	0.050	−0.02	57.5	1.29	0.27
39	60	0.400	0.02	27.5	4.53	0.325	0.06	40.0	4.76	0.050	0.00	60.0	2.40	0.23
40	61	0.350	0.02	30.0	4.24	0.300	0.02	30.0	4.48	0.025	0.00	60.0	1.89	0.24
41	62	0.400	0.04	30.0	3.86	0.300	0.00	27.5	4.19	0.025	−0.02	57.5	1.97	0.33
$Z = 22$ (Ti)														
12	34	0.350	−0.06	2.5	−0.03	0.325	−0.06	5.0	0.24	0.350	−0.10	22.5	0.02	0.22
36	58	0.425	0.00	30.0	4.68	0.375	0.04	37.5	4.91	0.125	0.02	60.0	2.77	0.24
$Z = 25$ (Mn)														
15	40	0.275	−0.04	32.5	−0.12	0.250	0.00	30.0	0.14	0.250	0.02	0.0	−0.20	0.27
39	64	0.275	0.00	0.0	3.26	0.200	0.00	15.0	3.49	0.000	0.00	0.0	2.70	0.23
$Z = 27$ (Co)														
38	65	0.300	0.02	0.0	2.90	0.225	0.02	−2.5	3.11	0.075	0.02	47.5	1.52	0.21
39	66	0.300	0.02	0.0	2.98	0.225	0.00	7.5	3.28	0.025	0.00	7.5	1.37	0.30
$Z = 28$ (Ni)														
18	46	0.350	0.12	0.0	1.20	0.325	0.10	−2.5	1.46	0.250	0.02	60.0	−0.82	0.26
19	47	0.425	0.10	0.0	2.30	0.325	0.10	20.0	2.53	0.050	0.00	57.5	−0.70	0.23
		0.425	0.10	0.0	2.30	0.325	0.10	20.0	2.53	0.125	0.00	60.0	−0.65	0.23
		0.050	0.00	57.5	−0.70	0.125	0.00	32.5	−0.42	0.125	0.00	60.0	−0.65	0.23
38	66	0.325	0.04	0.0	2.67	0.250	0.02	0.0	2.94	0.000	0.00	0.0	0.73	0.27
39	67	0.325	0.04	0.0	2.78	0.250	0.00	0.0	3.08	0.000	0.00	0.0	0.51	0.30
63	91	0.225	−0.04	60.0	2.06	0.225	0.00	40.0	2.30	0.300	0.00	0.0	1.03	0.24
64	92	0.225	−0.02	60.0	2.17	0.225	0.00	37.5	2.39	0.300	0.02	0.0	1.14	0.22
65	93	0.225	0.00	60.0	2.15	0.250	0.00	40.0	2.41	0.300	0.02	2.5	0.97	0.26
66	94	0.225	0.00	60.0	2.13	0.250	0.00	40.0	2.39	0.300	0.04	0.0	1.01	0.26
67	95	0.225	0.02	60.0	1.95	0.250	0.02	42.5	2.25	0.300	0.06	0.0	0.77	0.30
$Z = 29$ (Cu)														
67	96	0.225	0.02	60.0	2.08	0.250	0.02	40.0	2.30	0.275	0.04	2.5	1.30	0.22
$Z = 30$ (Zn)														
74	104	0.100	−0.02	2.5	0.42	0.125	0.00	17.5	0.71	0.200	0.02	25.0	0.39	0.29
$Z = 33$ (As)														
33	66	0.250	0.02	50.0	2.44	0.200	0.04	35.0	2.79	0.200	0.06	0.0	2.13	0.34
34	67	0.275	0.04	60.0	2.57	0.200	0.06	30.0	3.08	0.200	0.08	0.0	2.37	0.51
35	68	0.175	0.06	5.0	3.10	0.200	0.06	30.0	3.48	0.300	0.04	60.0	2.93	0.39
36	69	0.200	0.06	0.0	3.35	0.200	0.06	30.0	3.71	0.300	0.04	60.0	3.13	0.36
58	91	0.225	−0.02	60.0	2.80	0.200	0.02	35.0	3.01	0.200	0.04	0.0	2.15	0.22
59	92	0.250	−0.02	60.0	2.94	0.225	0.02	35.0	3.34	0.200	0.04	0.0	2.59	0.40
60	93	0.250	−0.02	60.0	3.15	0.225	0.00	37.5	3.58	0.300	−0.04	2.5	2.88	0.43
61	94	0.250	−0.02	60.0	3.36	0.250	0.02	37.5	3.75	0.300	−0.04	7.5	2.84	0.39
62	95	0.250	−0.02	60.0	3.51	0.275	0.02	37.5	3.79	0.300	−0.02	10.0	3.01	0.28
68	101	0.275	0.06	60.0	2.72	0.300	0.04	45.0	2.96	0.250	0.06	0.0	2.36	0.23
69	102	0.300	0.08	60.0	2.43	0.300	0.04	45.0	2.65	0.250	0.06	0.0	2.01	0.22
70	103	0.300	0.08	60.0	2.35	0.300	0.04	32.5	2.60	0.250	0.06	0.0	1.88	0.25
71	104	0.300	0.06	50.0	2.13	0.300	0.04	32.5	2.38	0.250	0.08	0.0	1.52	0.25
$Z = 34$ (Se)														
33	67	0.275	0.04	60.0	2.66	0.200	0.04	35.0	3.19	0.200	0.08	0.0	2.35	0.53
34	68	0.200	0.08	0.0	2.57	0.200	0.06	30.0	3.49	0.275	0.04	60.0	2.78	0.71
35	69	0.175	0.08	0.0	3.31	0.200	0.04	35.0	3.97	0.300	0.04	60.0	3.04	0.66

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 34$ (Se)														
36	70	0.200	0.08	0.0	3.56	0.175	0.06	30.0	4.20	0.325	0.04	60.0	3.22	0.64
37	71	0.250	0.08	0.0	4.09	0.200	0.06	30.0	4.49	0.275	0.02	57.5	3.79	0.39
38	72	0.300	0.04	0.0	4.15	0.200	0.06	22.5	4.44	0.275	0.04	60.0	3.78	0.29
39	73	0.300	0.06	0.0	4.24	0.250	0.06	27.5	4.57	0.250	0.04	57.5	3.94	0.33
58	92	0.250	−0.02	60.0	3.04	0.225	0.00	37.5	3.37	0.200	0.06	0.0	2.47	0.33
59	93	0.275	−0.04	0.0	3.02	0.250	0.00	37.5	3.68	0.250	−0.02	60.0	3.16	0.52
		0.275	−0.04	0.0	3.02	0.250	0.00	5.0	3.23	0.200	0.06	0.0	2.90	0.21
		0.250	−0.02	60.0	3.16	0.250	0.00	37.5	3.68	0.200	0.06	0.0	2.90	0.52
60	94	0.275	−0.02	60.0	3.32	0.250	0.02	37.5	3.93	0.300	−0.04	0.0	2.96	0.62
61	95	0.275	0.00	60.0	3.56	0.250	0.02	40.0	4.07	0.300	−0.02	0.0	2.92	0.52
62	96	0.275	0.00	60.0	3.67	0.250	0.02	37.5	4.14	0.300	−0.02	2.5	3.08	0.46
63	97	0.275	0.00	60.0	3.77	0.275	0.02	37.5	4.11	0.325	0.00	17.5	2.99	0.33
64	98	0.275	0.02	60.0	3.79	0.275	0.02	37.5	4.04	0.325	0.00	20.0	3.06	0.25
65	99	0.275	0.04	60.0	3.65	0.300	0.02	40.0	3.86	0.325	0.02	20.0	2.88	0.20
66	100	0.275	0.04	60.0	3.45	0.300	0.02	37.5	3.67	0.325	0.02	20.0	2.98	0.21
68	102	0.300	0.06	60.0	2.92	0.325	0.04	40.0	3.25	0.275	0.06	0.0	2.41	0.33
69	103	0.300	0.08	60.0	2.57	0.325	0.04	32.5	2.98	0.275	0.08	0.0	2.00	0.41
70	104	0.300	0.06	60.0	2.47	0.300	0.04	32.5	2.94	0.250	0.08	0.0	1.89	0.48
71	105	0.300	0.06	60.0	2.27	0.250	0.04	32.5	2.70	0.250	0.08	0.0	1.54	0.43
$Z = 35$ (Br)														
33	68	0.200	0.08	0.0	3.17	0.225	0.06	35.0	3.62	0.300	0.04	60.0	2.85	0.45
34	69	0.200	0.08	0.0	3.40	0.200	0.06	30.0	3.94	0.325	0.04	60.0	2.86	0.54
35	70	0.250	0.06	0.0	3.88	0.350	0.02	37.5	4.64	0.375	−0.02	20.0	4.14	0.50
		0.250	0.06	0.0	3.88	0.200	0.06	35.0	4.36	0.325	0.04	60.0	3.03	0.48
		0.375	−0.02	20.0	4.14	0.350	0.02	37.5	4.64	0.325	0.04	60.0	3.03	0.50
36	71	0.375	−0.02	20.0	4.08	0.325	0.00	12.5	4.37	0.250	0.08	0.0	4.02	0.28
		0.375	−0.02	20.0	4.08	0.200	0.08	30.0	4.61	0.350	0.04	60.0	3.18	0.52
		0.250	0.08	0.0	4.02	0.200	0.08	30.0	4.61	0.350	0.04	60.0	3.18	0.59
37	72	0.275	0.06	0.0	4.19	0.225	0.06	25.0	5.01	0.350	0.04	60.0	3.76	0.82
38	73	0.325	0.02	2.5	3.82	0.225	0.06	30.0	4.95	0.325	0.04	60.0	3.84	1.11
39	74	0.275	0.04	60.0	4.16	0.275	0.04	30.0	4.92	0.325	0.04	2.5	3.96	0.77
40	75	0.300	0.06	0.0	4.14	0.275	0.04	30.0	4.60	0.275	0.04	60.0	3.95	0.46
57	92	0.250	−0.02	60.0	3.09	0.200	0.00	37.5	3.44	0.200	0.04	0.0	2.67	0.36
58	93	0.250	−0.02	60.0	3.30	0.225	0.02	37.5	3.88	0.225	0.04	0.0	2.96	0.57
59	94	0.275	−0.02	60.0	3.37	0.250	0.00	37.5	4.14	0.300	−0.02	0.0	3.04	0.77
60	95	0.300	−0.02	60.0	3.48	0.250	0.02	37.5	4.40	0.300	−0.02	0.0	2.95	0.92
61	96	0.300	0.00	60.0	3.73	0.250	0.02	35.0	4.54	0.300	−0.02	0.0	2.88	0.81
62	97	0.300	0.00	60.0	3.83	0.250	0.02	35.0	4.60	0.300	−0.02	2.5	3.04	0.78
63	98	0.300	0.02	60.0	3.95	0.300	0.02	37.5	4.54	0.325	0.00	15.0	3.01	0.59
64	99	0.300	0.02	60.0	4.00	0.300	0.02	35.0	4.44	0.325	0.00	17.5	3.10	0.44
65	100	0.300	0.04	60.0	3.88	0.300	0.02	37.5	4.27	0.325	0.02	17.5	2.95	0.39
66	101	0.300	0.04	60.0	3.70	0.300	0.02	35.0	4.10	0.275	0.04	0.0	3.04	0.40
67	102	0.300	0.06	60.0	3.40	0.325	0.02	37.5	3.84	0.275	0.06	0.0	2.69	0.44
68	103	0.300	0.06	60.0	3.13	0.350	0.02	35.0	3.68	0.275	0.06	0.0	2.47	0.55
69	104	0.300	0.06	60.0	2.78	0.350	0.02	32.5	3.46	0.275	0.08	0.0	2.08	0.69
70	105	0.300	0.06	60.0	2.67	0.275	0.04	32.5	3.47	0.275	0.08	0.0	2.04	0.80
71	106	0.300	0.06	60.0	2.46	0.250	0.04	32.5	3.16	0.250	0.08	0.0	1.80	0.70
72	107	0.300	0.04	57.5	2.43	0.250	0.04	37.5	2.88	0.250	0.08	0.0	1.88	0.45
$Z = 36$ (Kr)														
33	69	0.200	0.06	0.0	3.35	0.225	0.06	32.5	3.79	0.325	0.04	60.0	3.05	0.44

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 36$ (Kr)														
34	70	0.375	−0.02	20.0	3.99	0.375	0.00	35.0	4.38	0.200	0.08	0.0	3.57	0.39
		0.375	−0.02	20.0	3.99	0.375	0.00	35.0	4.38	0.325	0.04	60.0	3.02	0.39
		0.200	0.08	0.0	3.57	0.225	0.06	32.5	4.17	0.325	0.04	60.0	3.02	0.60
35	71	0.375	−0.02	20.0	4.02	0.200	0.06	37.5	4.60	0.350	0.04	60.0	3.14	0.59
36	72	0.375	0.00	17.5	3.99	0.200	0.06	30.0	4.86	0.350	0.04	60.0	3.21	0.87
37	73	0.375	0.06	60.0	3.72	0.375	0.02	40.0	5.03	0.325	0.02	0.0	3.69	1.31
38	74	0.350	0.04	60.0	3.93	0.400	0.00	37.5	4.97	0.350	0.04	0.0	3.37	1.04
39	75	0.300	0.04	60.0	4.36	0.275	0.04	30.0	5.12	0.350	0.04	0.0	3.36	0.76
40	76	0.225	0.04	60.0	4.20	0.300	0.04	30.0	4.77	0.350	0.06	0.0	3.64	0.57
41	77	0.225	0.04	60.0	4.09	0.300	0.04	37.5	4.59	0.325	0.04	0.0	3.87	0.50
57	93	0.250	−0.02	57.5	3.32	0.200	0.00	37.5	3.73	0.225	0.04	0.0	2.92	0.40
58	94	0.275	−0.02	60.0	3.55	0.225	0.02	35.0	4.13	0.275	0.00	0.0	3.19	0.58
59	95	0.275	−0.02	60.0	3.56	0.250	0.00	35.0	4.42	0.300	−0.02	0.0	2.88	0.85
60	96	0.300	−0.02	60.0	3.60	0.275	0.00	37.5	4.64	0.300	−0.02	0.0	2.80	1.04
61	97	0.300	0.00	60.0	3.88	0.250	0.02	35.0	4.78	0.300	−0.02	0.0	2.74	0.91
62	98	0.300	0.00	60.0	3.98	0.275	0.02	37.5	4.83	0.325	0.00	0.0	2.86	0.85
63	99	0.300	0.02	60.0	4.13	0.300	0.02	37.5	4.76	0.325	0.00	7.5	2.82	0.63
64	100	0.300	0.02	60.0	4.18	0.300	0.02	37.5	4.69	0.325	0.02	10.0	2.96	0.51
65	101	0.300	0.04	57.5	4.08	0.300	0.02	37.5	4.50	0.325	0.02	12.5	2.79	0.42
66	102	0.300	0.04	57.5	3.90	0.325	0.02	37.5	4.33	0.300	0.04	0.0	2.84	0.43
67	103	0.300	0.06	60.0	3.59	0.325	0.02	37.5	4.05	0.300	0.06	0.0	2.53	0.46
68	104	0.300	0.06	60.0	3.33	0.325	0.02	40.0	3.85	0.300	0.06	0.0	2.41	0.52
69	105	0.300	0.06	60.0	2.96	0.325	0.04	32.5	3.61	0.275	0.08	0.0	2.08	0.65
70	106	0.300	0.06	60.0	2.86	0.300	0.04	32.5	3.63	0.275	0.08	0.0	2.04	0.78
71	107	0.300	0.06	60.0	2.63	0.250	0.04	32.5	3.44	0.275	0.08	0.0	1.85	0.80
72	108	0.300	0.06	60.0	2.62	0.250	0.06	32.5	3.15	0.250	0.08	0.0	2.04	0.53
73	109	0.300	0.04	55.0	2.41	0.225	0.04	35.0	2.66	0.250	0.08	0.0	2.14	0.26
$Z = 37$ (Rb)														
29	66	0.300	0.02	0.0	2.30	0.225	0.02	0.0	2.52	0.125	0.02	55.0	1.81	0.22
33	70	0.250	0.06	0.0	3.67	0.225	0.06	30.0	4.05	0.275	0.04	55.0	3.50	0.37
34	71	0.275	0.06	0.0	3.81	0.225	0.06	30.0	4.45	0.350	0.04	60.0	3.41	0.64
35	72	0.300	0.04	0.0	3.90	0.400	0.00	37.5	4.72	0.375	0.06	60.0	3.47	0.83
36	73	0.325	0.04	0.0	3.53	0.375	0.00	37.5	4.84	0.375	0.06	60.0	3.47	1.31
37	74	0.400	0.06	60.0	3.90	0.400	0.00	40.0	5.01	0.325	0.04	0.0	3.25	1.12
38	75	0.375	0.06	60.0	4.16	0.400	0.00	40.0	4.98	0.350	0.04	0.0	2.83	0.82
39	76	0.200	0.04	60.0	4.71	0.375	0.02	42.5	5.07	0.350	0.04	0.0	2.81	0.36
40	77	0.200	0.06	60.0	4.37	0.325	0.04	35.0	4.84	0.350	0.06	0.0	2.99	0.47
41	78	0.225	0.06	60.0	4.26	0.300	0.06	35.0	4.68	0.325	0.04	0.0	3.34	0.42
42	79	0.225	0.06	60.0	3.86	0.300	0.04	32.5	4.23	0.325	0.04	0.0	3.64	0.37
43	80	0.300	0.04	17.5	3.71	0.300	0.04	30.0	3.99	0.250	0.06	55.0	3.72	0.28
57	94	0.225	−0.02	57.5	3.72	0.200	0.00	37.5	3.93	0.250	0.02	0.0	3.06	0.21
58	95	0.250	−0.02	60.0	3.98	0.250	0.00	35.0	4.36	0.275	0.00	0.0	3.03	0.38
59	96	0.275	−0.02	60.0	4.11	0.250	0.00	37.5	4.61	0.300	−0.02	0.0	2.71	0.49
60	97	0.300	−0.02	60.0	4.10	0.275	0.00	40.0	4.83	0.300	−0.02	0.0	2.61	0.74
61	98	0.325	0.00	60.0	4.28	0.275	0.00	40.0	5.00	0.325	0.00	0.0	2.48	0.72
62	99	0.325	0.00	60.0	4.44	0.275	0.02	42.5	5.01	0.325	0.00	0.0	2.60	0.57
63	100	0.300	0.02	60.0	4.63	0.300	0.02	37.5	4.99	0.325	0.02	0.0	2.55	0.37
64	101	0.300	0.02	60.0	4.68	0.300	0.02	37.5	4.92	0.325	0.02	0.0	2.69	0.25
65	102	0.300	0.04	60.0	4.56	0.300	0.02	40.0	4.77	0.300	0.02	0.0	2.60	0.21
67	104	0.300	0.06	60.0	4.08	0.325	0.02	37.5	4.29	0.300	0.04	0.0	2.32	0.21

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 37$ (Rb)														
68	105	0.275	0.06	60.0	3.78	0.325	0.02	37.5	4.07	0.300	0.06	0.0	2.21	0.29
69	106	0.300	0.06	60.0	3.43	0.325	0.04	32.5	3.81	0.300	0.08	0.0	1.88	0.38
70	107	0.300	0.06	60.0	3.31	0.300	0.04	32.5	3.84	0.300	0.08	0.0	1.93	0.53
71	108	0.300	0.06	60.0	3.08	0.275	0.04	32.5	3.62	0.275	0.08	0.0	1.86	0.54
72	109	0.300	0.06	52.5	3.06	0.250	0.06	32.5	3.38	0.275	0.08	0.0	2.12	0.33
$Z = 38$ (Sr)														
33	71	0.300	0.04	57.5	3.52	0.225	0.06	30.0	3.95	0.300	0.04	0.0	3.64	0.31
34	72	0.325	0.04	60.0	3.58	0.250	0.06	30.0	4.36	0.300	0.06	0.0	3.66	0.70
35	73	0.350	0.06	60.0	3.71	0.350	0.00	37.5	4.77	0.325	0.02	0.0	3.51	1.06
36	74	0.375	0.06	60.0	3.77	0.375	0.00	40.0	4.83	0.350	0.04	0.0	3.06	1.06
37	75	0.400	0.06	60.0	4.22	0.400	0.00	40.0	5.01	0.350	0.04	0.0	2.73	0.79
38	76	0.375	0.06	60.0	4.49	0.425	0.00	35.0	4.97	0.350	0.04	0.0	2.28	0.48
39	77	0.175	0.06	60.0	4.57	0.275	0.04	35.0	5.10	0.375	0.06	0.0	2.14	0.53
40	78	0.200	0.06	60.0	4.25	0.300	0.04	35.0	4.78	0.375	0.06	0.0	2.30	0.53
41	79	0.200	0.06	60.0	4.14	0.300	0.06	35.0	4.56	0.375	0.06	0.0	2.79	0.43
42	80	0.200	0.06	60.0	3.75	0.300	0.04	32.5	4.13	0.375	0.06	0.0	3.19	0.39
43	81	0.225	0.06	50.0	3.61	0.300	0.04	30.0	3.86	0.325	0.04	12.5	3.56	0.25
58	96	0.250	−0.02	60.0	4.06	0.250	0.00	37.5	4.29	0.300	0.00	0.0	2.86	0.23
59	97	0.275	−0.02	60.0	4.17	0.250	0.00	42.5	4.57	0.300	0.00	0.0	2.58	0.40
60	98	0.300	−0.02	60.0	4.24	0.275	0.00	40.0	4.84	0.325	0.00	0.0	2.34	0.59
61	99	0.325	0.00	60.0	4.47	0.275	0.02	40.0	4.98	0.325	0.00	0.0	2.23	0.51
62	100	0.300	0.00	60.0	4.60	0.275	0.02	42.5	5.03	0.325	0.00	0.0	2.33	0.42
63	101	0.300	0.02	60.0	4.74	0.275	0.02	42.5	5.00	0.325	0.02	0.0	2.26	0.26
68	106	0.275	0.06	60.0	3.77	0.300	0.04	35.0	4.09	0.300	0.06	0.0	2.05	0.32
69	107	0.275	0.06	60.0	3.46	0.300	0.04	32.5	3.84	0.300	0.08	0.0	1.73	0.38
70	108	0.300	0.06	60.0	3.34	0.300	0.04	32.5	3.85	0.300	0.08	0.0	1.79	0.51
71	109	0.300	0.06	60.0	3.10	0.250	0.04	32.5	3.64	0.300	0.08	0.0	1.78	0.54
72	110	0.300	0.06	52.5	3.10	0.250	0.06	32.5	3.37	0.300	0.08	0.0	2.10	0.27
74	112	0.300	0.06	0.0	2.62	0.275	0.06	12.5	2.87	0.200	0.06	30.0	2.42	0.25
91	129	0.250	−0.06	0.0	1.53	0.200	−0.04	15.0	1.83	0.150	−0.02	55.0	1.61	0.22
92	130	0.200	−0.04	60.0	2.09	0.200	−0.02	25.0	2.33	0.250	−0.06	0.0	1.53	0.24
$Z = 39$ (Y)														
33	72	0.250	0.04	55.0	3.58	0.250	0.04	30.0	3.92	0.300	0.06	0.0	3.62	0.30
34	73	0.275	0.04	60.0	3.70	0.325	0.04	30.0	4.21	0.325	0.06	0.0	3.48	0.51
35	74	0.300	0.04	60.0	4.01	0.375	0.00	35.0	4.57	0.325	0.06	0.0	3.48	0.56
36	75	0.350	0.06	57.5	4.14	0.400	0.00	40.0	4.66	0.350	0.06	0.0	2.90	0.52
38	77	0.175	0.06	60.0	4.51	0.400	0.00	35.0	4.88	0.375	0.06	0.0	1.97	0.36
39	78	0.175	0.06	60.0	4.45	0.300	0.06	35.0	4.93	0.375	0.08	0.0	1.86	0.48
40	79	0.000	0.00	0.0	4.69	0.075	0.02	60.0	4.98	0.200	0.06	60.0	4.12	0.29
		0.000	0.00	0.0	4.69	0.075	0.02	60.0	4.98	0.375	0.08	0.0	1.95	0.29
		0.200	0.06	60.0	4.12	0.300	0.06	35.0	4.60	0.375	0.08	0.0	1.95	0.48
41	80	0.200	0.06	60.0	4.00	0.275	0.06	37.5	4.41	0.375	0.08	0.0	2.43	0.41
42	81	0.000	0.00	0.0	3.95	0.075	0.02	60.0	4.34	0.200	0.06	60.0	3.60	0.39
		0.000	0.00	0.0	3.95	0.075	0.02	60.0	4.34	0.375	0.08	0.0	2.82	0.39
		0.200	0.06	60.0	3.60	0.275	0.04	35.0	3.98	0.375	0.08	0.0	2.82	0.38
43	82	0.025	0.00	50.0	3.84	0.075	0.02	60.0	4.12	0.225	0.06	50.0	3.47	0.29
		0.025	0.00	50.0	3.84	0.075	0.02	60.0	4.12	0.375	0.08	0.0	3.30	0.29
		0.225	0.06	50.0	3.47	0.300	0.04	30.0	3.67	0.375	0.08	0.0	3.30	0.20
60	99	0.275	−0.02	60.0	4.61	0.275	0.00	45.0	4.86	0.325	0.00	0.0	2.38	0.25
61	100	0.275	0.00	60.0	4.83	0.275	0.00	45.0	5.03	0.325	0.02	0.0	2.27	0.21

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 39$ (Y)														
68	107	0.250	0.06	60.0	3.91	0.300	0.04	42.5	4.16	0.300	0.06	0.0	1.97	0.25
70	109	0.250	0.06	60.0	3.49	0.300	0.04	32.5	3.83	0.300	0.08	0.0	1.68	0.33
71	110	0.250	0.06	57.5	3.31	0.275	0.04	32.5	3.58	0.325	0.08	0.0	1.69	0.27
74	113	0.225	0.06	30.0	2.43	0.275	0.06	15.0	2.99	0.325	0.06	0.0	2.59	0.40
$Z = 40$ (Zr)														
34	74	0.250	0.04	60.0	3.50	0.325	0.04	30.0	3.82	0.325	0.08	0.0	3.58	0.24
35	75	0.275	0.04	60.0	3.88	0.325	0.04	30.0	4.39	0.325	0.06	0.0	3.54	0.51
36	76	0.275	0.06	60.0	4.09	0.325	0.04	35.0	4.53	0.350	0.06	0.0	3.02	0.44
37	77	0.200	0.06	60.0	4.41	0.325	0.04	37.5	4.77	0.350	0.06	0.0	2.68	0.36
38	78	0.200	0.06	60.0	4.25	0.300	0.06	37.5	4.69	0.375	0.08	0.0	2.06	0.44
39	79	0.200	0.06	60.0	4.18	0.300	0.06	37.5	4.66	0.375	0.08	0.0	1.88	0.48
40	80	0.000	0.00	0.0	4.55	0.075	0.02	60.0	4.77	0.200	0.06	60.0	3.80	0.22
		0.000	0.00	0.0	4.55	0.075	0.02	60.0	4.77	0.375	0.08	0.0	2.00	0.22
		0.200	0.06	60.0	3.80	0.300	0.06	37.5	4.38	0.375	0.08	0.0	2.00	0.57
41	81	0.200	0.06	60.0	3.68	0.275	0.06	40.0	4.16	0.400	0.08	0.0	2.46	0.49
42	82	0.000	0.00	0.0	3.78	0.075	0.00	60.0	4.11	0.225	0.08	60.0	3.26	0.32
		0.000	0.00	0.0	3.78	0.075	0.00	60.0	4.11	0.375	0.08	0.0	2.89	0.32
		0.225	0.08	60.0	3.26	0.275	0.06	37.5	3.73	0.375	0.08	0.0	2.89	0.47
43	83	0.025	0.00	50.0	3.66	0.100	0.02	60.0	3.90	0.375	0.08	0.0	3.37	0.24
		0.025	0.00	50.0	3.66	0.100	0.02	60.0	3.90	0.225	0.08	57.5	3.11	0.24
		0.375	0.08	0.0	3.37	0.350	0.06	7.5	3.60	0.225	0.08	57.5	3.11	0.24
44	84	0.000	0.00	0.0	2.75	0.100	0.02	60.0	3.06	0.225	0.08	60.0	2.71	0.31
67	107	0.250	0.06	57.5	3.98	0.275	0.06	45.0	4.20	0.325	0.06	0.0	2.21	0.21
68	108	0.250	0.06	60.0	3.67	0.275	0.04	42.5	4.03	0.325	0.08	0.0	2.18	0.37
69	109	0.250	0.06	60.0	3.37	0.275	0.04	42.5	3.73	0.325	0.08	0.0	1.82	0.36
70	110	0.250	0.06	60.0	3.23	0.300	0.04	32.5	3.60	0.325	0.08	0.0	1.92	0.37
71	111	0.225	0.06	60.0	3.13	0.275	0.04	32.5	3.39	0.325	0.08	0.0	1.90	0.25
72	112	0.225	0.06	60.0	2.93	0.250	0.06	32.5	3.17	0.325	0.08	0.0	2.25	0.24
73	113	0.200	0.06	50.0	2.59	0.275	0.06	12.5	2.90	0.325	0.08	0.0	2.42	0.32
74	114	0.325	0.08	0.0	2.90	0.275	0.06	12.5	3.11	0.175	0.06	57.5	2.19	0.20
$Z = 41$ (Nb)														
35	76	0.275	0.06	57.5	3.71	0.325	0.04	30.0	4.01	0.300	0.06	0.0	3.65	0.30
36	77	0.250	0.06	60.0	3.86	0.300	0.06	40.0	4.22	0.375	0.06	0.0	3.16	0.36
37	78	0.225	0.06	60.0	4.13	0.300	0.06	40.0	4.47	0.375	0.06	0.0	2.90	0.35
38	79	0.200	0.06	60.0	3.98	0.300	0.06	37.5	4.34	0.375	0.06	0.0	2.29	0.36
39	80	0.200	0.06	60.0	3.91	0.275	0.06	40.0	4.36	0.400	0.08	0.0	2.17	0.45
40	81	0.200	0.08	60.0	3.51	0.275	0.06	40.0	4.05	0.400	0.08	0.0	2.18	0.54
41	82	0.225	0.08	60.0	3.34	0.275	0.06	40.0	3.87	0.400	0.08	0.0	2.49	0.52
42	83	0.225	0.08	60.0	2.88	0.375	0.08	12.5	3.64	0.425	0.10	0.0	2.88	0.76
43	84	0.400	0.08	0.0	3.49	0.375	0.08	12.5	4.00	0.225	0.08	57.5	2.73	0.51
68	109	0.250	0.06	60.0	3.57	0.275	0.06	45.0	3.87	0.300	0.06	0.0	2.56	0.30
69	110	0.250	0.06	60.0	3.23	0.275	0.04	40.0	3.56	0.300	0.08	0.0	2.17	0.33
70	111	0.225	0.06	60.0	3.16	0.275	0.04	37.5	3.41	0.300	0.08	0.0	2.24	0.25
82	123	0.425	0.04	0.0	5.44	0.375	0.06	0.0	5.76	0.000	0.00	0.0	−6.35	0.32
83	124	0.425	0.04	0.0	5.41	0.375	0.04	0.0	5.76	0.025	0.00	60.0	−5.45	0.35
$Z = 42$ (Mo)														
36	78	0.375	0.06	0.0	3.44	0.300	0.06	32.5	3.86	0.250	0.06	60.0	3.48	0.38
37	79	0.225	0.08	60.0	3.77	0.300	0.04	35.0	4.12	0.375	0.06	0.0	3.21	0.35
38	80	0.225	0.08	60.0	3.61	0.300	0.06	35.0	4.00	0.375	0.06	0.0	2.65	0.38

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 42$ (Mo)														
39	81	0.200	0.08	60.0	3.58	0.275	0.06	37.5	3.98	0.400	0.08	0.0	2.52	0.41
40	82	0.000	0.00	0.0	4.27	0.075	0.00	60.0	4.49	0.225	0.08	60.0	3.14	0.21
		0.000	0.00	0.0	4.27	0.075	0.00	60.0	4.49	0.400	0.08	0.0	2.57	0.21
		0.225	0.08	60.0	3.14	0.275	0.06	37.5	3.68	0.400	0.08	0.0	2.57	0.54
41	83	0.225	0.08	60.0	2.96	0.375	0.08	15.0	3.63	0.425	0.08	0.0	2.75	0.67
42	84	0.000	0.00	0.0	3.48	0.100	0.02	60.0	3.81	0.225	0.08	60.0	2.50	0.33
43	85	0.425	0.08	0.0	3.77	0.375	0.06	12.5	4.29	0.025	0.00	45.0	3.33	0.52
		0.425	0.08	0.0	3.77	0.375	0.06	12.5	4.29	0.225	0.08	57.5	2.33	0.52
		0.025	0.00	45.0	3.33	0.100	0.02	60.0	3.59	0.225	0.08	57.5	2.33	0.26
44	86	0.425	0.08	0.0	4.41	0.375	0.06	10.0	4.65	0.025	0.00	2.5	2.40	0.25
		0.425	0.08	0.0	4.41	0.375	0.06	10.0	4.65	0.225	0.08	60.0	1.92	0.25
		0.025	0.00	2.5	2.40	0.100	0.02	60.0	2.75	0.225	0.08	60.0	1.92	0.35
45	87	0.025	0.00	0.0	1.98	0.150	0.02	30.0	2.30	0.225	0.08	55.0	1.68	0.32
68	110	0.250	0.08	60.0	3.16	0.275	0.06	42.5	3.56	0.300	0.06	0.0	2.88	0.39
69	111	0.250	0.08	60.0	2.82	0.275	0.06	42.5	3.26	0.300	0.08	0.0	2.53	0.44
70	112	0.250	0.08	60.0	2.68	0.250	0.04	42.5	3.05	0.275	0.08	0.0	2.55	0.37
71	113	0.275	0.08	0.0	2.47	0.250	0.04	32.5	2.84	0.225	0.06	60.0	2.57	0.27
83	125	0.425	0.04	0.0	5.45	0.375	0.04	0.0	6.18	0.025	0.00	57.5	−6.02	0.73
84	126	0.425	0.04	0.0	5.64	0.375	0.04	0.0	6.15	0.000	0.00	0.0	−5.03	0.52
85	127	0.425	0.04	0.0	5.74	0.375	0.04	12.5	6.02	0.000	0.00	0.0	−4.01	0.29
101	143	0.300	0.00	32.5	1.75	0.300	0.00	30.0	1.95	0.300	0.04	0.0	1.11	0.21
102	144	0.300	0.00	32.5	1.80	0.300	0.02	30.0	2.08	0.300	0.04	0.0	1.14	0.27
$Z = 43$ (Tc)														
38	81	0.225	0.08	60.0	3.25	0.300	0.04	25.0	3.59	0.375	0.06	0.0	2.95	0.34
39	82	0.225	0.08	60.0	3.20	0.300	0.04	17.5	3.56	0.375	0.06	0.0	2.91	0.36
40	83	0.400	0.08	0.0	3.03	0.350	0.06	12.5	3.59	0.225	0.08	60.0	2.74	0.57
41	84	0.425	0.08	0.0	3.38	0.375	0.08	12.5	3.83	0.225	0.08	60.0	2.56	0.45
42	85	0.425	0.08	0.0	3.73	0.375	0.08	12.5	4.20	0.025	0.00	30.0	3.20	0.47
		0.425	0.08	0.0	3.73	0.375	0.08	12.5	4.20	0.225	0.10	60.0	2.08	0.47
		0.025	0.00	30.0	3.20	0.100	0.02	60.0	3.54	0.225	0.10	60.0	2.08	0.33
43	86	0.025	0.00	30.0	3.02	0.125	0.00	27.5	3.33	0.225	0.10	57.5	1.88	0.31
44	87	0.025	0.00	30.0	2.07	0.125	0.00	27.5	2.43	0.225	0.10	57.5	1.49	0.37
45	88	0.025	0.00	30.0	1.65	0.150	0.00	15.0	1.90	0.250	0.06	40.0	1.28	0.25
68	111	0.250	0.08	60.0	2.90	0.250	0.04	42.5	3.19	0.275	0.06	15.0	2.87	0.29
69	112	0.250	0.08	60.0	2.54	0.275	0.06	42.5	2.96	0.275	0.06	0.0	2.58	0.38
101	144	0.275	0.00	32.5	1.63	0.300	0.00	30.0	1.86	0.275	0.02	0.0	1.13	0.23
102	145	0.275	0.00	32.5	1.70	0.300	0.02	30.0	1.96	0.275	0.02	0.0	1.23	0.27
103	146	0.300	0.02	32.5	1.47	0.300	0.02	30.0	1.75	0.300	0.04	0.0	0.96	0.28
104	147	0.275	0.02	32.5	1.49	0.300	0.04	30.0	1.86	0.275	0.04	0.0	1.14	0.37
$Z = 44$ (Ru)														
38	82	0.375	0.06	0.0	3.27	0.325	0.04	10.0	3.48	0.225	0.08	52.5	2.95	0.20
39	83	0.375	0.06	0.0	3.24	0.325	0.06	15.0	3.57	0.225	0.08	60.0	2.93	0.33
40	84	0.400	0.08	0.0	3.45	0.350	0.06	17.5	3.72	0.000	0.00	0.0	3.29	0.27
		0.400	0.08	0.0	3.45	0.350	0.06	17.5	3.72	0.225	0.08	60.0	2.48	0.27
		0.000	0.00	0.0	3.29	0.075	0.04	60.0	3.65	0.225	0.08	60.0	2.48	0.36
41	85	0.400	0.08	0.0	3.78	0.400	0.08	10.0	4.02	0.225	0.08	60.0	2.30	0.24
42	86	0.000	0.00	0.0	2.47	0.100	0.02	55.0	2.96	0.225	0.10	60.0	1.83	0.50
43	87	0.025	0.00	30.0	2.32	0.125	0.00	22.5	2.73	0.250	0.06	40.0	1.67	0.41
44	88	0.000	0.00	0.0	1.32	0.150	0.00	15.0	1.92	0.250	0.06	37.5	1.21	0.60
45	89	0.000	0.00	0.0	0.91	0.175	0.00	17.5	1.42	0.250	0.06	37.5	0.89	0.51

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 44$ (Ru)														
101	145	0.275	0.00	32.5	1.68	0.275	0.00	30.0	1.91	0.275	0.02	0.0	1.35	0.23
102	146	0.275	0.02	32.5	1.73	0.275	0.00	30.0	2.00	0.275	0.02	0.0	1.45	0.27
103	147	0.275	0.02	32.5	1.48	0.275	0.02	30.0	1.77	0.275	0.04	5.0	1.22	0.29
104	148	0.275	0.02	32.5	1.53	0.275	0.04	30.0	1.83	0.275	0.04	12.5	1.34	0.30
105	149	0.275	0.04	32.5	1.21	0.275	0.04	30.0	1.53	0.275	0.04	17.5	1.09	0.32
106	150	0.275	0.06	20.0	1.21	0.275	0.04	30.0	1.53	0.275	0.04	32.5	1.18	0.32
$Z = 45$ (Rh)														
42	87	0.000	0.00	0.0	1.91	0.125	0.00	27.5	2.30	0.250	0.08	45.0	1.41	0.38
43	88	0.025	0.00	60.0	1.74	0.150	−0.02	12.5	2.06	0.250	0.06	37.5	1.19	0.32
44	89	0.000	0.00	0.0	0.75	0.175	0.02	20.0	1.23	0.250	0.06	37.5	0.70	0.47
45	90	0.125	−0.02	0.0	0.33	0.200	0.04	25.0	0.66	0.250	0.06	37.5	0.38	0.27
101	146	0.275	0.00	32.5	1.62	0.275	0.00	30.0	1.82	0.275	0.02	5.0	1.28	0.20
102	147	0.275	0.02	32.5	1.64	0.275	0.02	30.0	1.87	0.275	0.02	5.0	1.37	0.23
103	148	0.275	0.02	32.5	1.39	0.275	0.02	30.0	1.65	0.275	0.04	12.5	1.17	0.26
104	149	0.275	0.02	32.5	1.44	0.275	0.04	30.0	1.68	0.275	0.04	15.0	1.25	0.25
105	150	0.275	0.04	17.5	0.99	0.275	0.04	30.0	1.40	0.275	0.04	32.5	1.10	0.30
$Z = 46$ (Pd)														
40	86	0.000	0.00	0.0	1.89	0.100	0.02	60.0	2.12	0.225	0.08	60.0	1.80	0.22
42	88	0.225	0.08	47.5	1.18	0.150	0.02	30.0	1.62	0.000	0.00	0.0	1.08	0.44
43	89	0.025	0.00	30.0	0.91	0.175	0.02	25.0	1.37	0.250	0.08	42.5	0.98	0.39
69	115	0.225	0.06	0.0	2.09	0.250	0.06	22.5	2.31	0.250	0.06	60.0	1.59	0.22
103	149	0.275	0.02	32.5	1.57	0.275	0.02	30.0	1.78	0.250	0.02	0.0	1.22	0.21
104	150	0.275	0.02	32.5	1.62	0.275	0.04	30.0	1.83	0.275	0.04	15.0	1.38	0.21
$Z = 47$ (Ag)														
65	112	0.225	0.04	12.5	2.52	0.225	0.04	35.0	2.76	0.250	0.04	55.0	2.44	0.25
66	113	0.200	0.04	0.0	2.41	0.225	0.04	32.5	2.69	0.225	0.04	60.0	2.19	0.29
67	114	0.225	0.04	5.0	2.22	0.225	0.04	35.0	2.59	0.250	0.06	57.5	1.94	0.37
68	115	0.200	0.04	0.0	2.03	0.200	0.04	32.5	2.45	0.250	0.06	60.0	1.56	0.43
69	116	0.200	0.06	0.0	1.74	0.200	0.04	32.5	2.22	0.250	0.06	60.0	1.25	0.48
70	117	0.200	0.06	0.0	1.53	0.175	0.04	25.0	1.85	0.250	0.06	60.0	1.11	0.32
71	118	0.200	0.06	0.0	1.20	0.175	0.04	32.5	1.48	0.250	0.06	57.5	0.93	0.29
106	153	0.250	0.02	60.0	1.61	0.250	0.02	45.0	1.88	0.250	0.04	12.5	1.11	0.27
107	154	0.275	0.06	32.5	0.95	0.275	0.06	30.0	1.23	0.250	0.06	15.0	0.90	0.28
108	155	0.275	0.06	32.5	0.93	0.250	0.06	30.0	1.26	0.225	0.06	10.0	0.96	0.30
109	156	0.250	0.06	32.5	0.64	0.250	0.06	30.0	0.89	0.200	0.06	2.5	0.63	0.25
110	157	0.250	0.06	32.5	0.58	0.250	0.06	30.0	0.89	0.200	0.08	0.0	0.63	0.26
111	158	0.250	0.06	32.5	0.19	0.200	0.06	30.0	0.57	0.200	0.08	0.0	0.19	0.39
112	159	0.225	0.06	37.5	0.03	0.200	0.06	30.0	0.41	0.200	0.08	0.0	0.16	0.25
113	160	0.225	0.08	45.0	−0.60	0.200	0.06	25.0	0.01	0.175	0.08	0.0	−0.31	0.32
$Z = 48$ (Cd)														
65	113	0.200	0.02	60.0	2.22	0.100	0.00	32.5	2.43	0.175	0.04	0.0	2.10	0.21
66	114	0.175	0.04	0.0	2.00	0.125	0.02	30.0	2.29	0.225	0.04	60.0	1.98	0.29
67	115	0.175	0.04	0.0	1.92	0.125	0.02	22.5	2.26	0.225	0.04	60.0	1.75	0.34
68	116	0.175	0.04	0.0	1.68	0.125	0.02	25.0	1.95	0.225	0.04	60.0	1.44	0.27
69	117	0.175	0.04	0.0	1.44	0.125	0.02	20.0	1.76	0.225	0.06	60.0	1.18	0.32
104	152	0.250	0.02	60.0	2.12	0.250	0.02	45.0	2.40	0.250	0.02	0.0	1.13	0.29
105	153	0.250	0.02	60.0	1.78	0.275	0.02	45.0	2.04	0.250	0.04	0.0	0.98	0.27
106	154	0.250	0.02	60.0	1.70	0.275	0.02	45.0	2.02	0.225	0.04	0.0	1.13	0.32
107	155	0.250	0.02	60.0	1.44	0.275	0.02	42.5	1.74	0.275	0.06	32.5	1.30	0.30

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 48$ (Cd)														
107	155	0.250	0.02	60.0	1.44	0.275	0.02	42.5	1.74	0.225	0.04	0.0	0.97	0.30
		0.275	0.06	32.5	1.30	0.275	0.06	30.0	1.53	0.225	0.04	0.0	0.97	0.23
108	156	0.250	0.02	60.0	1.44	0.250	0.04	45.0	1.73	0.275	0.06	32.5	1.28	0.29
		0.250	0.02	60.0	1.44	0.250	0.04	45.0	1.73	0.200	0.06	0.0	0.97	0.29
		0.275	0.06	32.5	1.28	0.250	0.06	30.0	1.55	0.200	0.06	0.0	0.97	0.27
109	157	0.250	0.06	32.5	0.98	0.250	0.06	30.0	1.20	0.200	0.06	0.0	0.59	0.22
110	158	0.225	0.06	32.5	0.89	0.200	0.04	30.0	1.17	0.200	0.06	0.0	0.59	0.28
111	159	0.225	0.06	32.5	0.42	0.200	0.06	30.0	0.75	0.175	0.06	0.0	0.14	0.33
112	160	0.200	0.06	32.5	0.31	0.175	0.04	30.0	0.52	0.175	0.06	0.0	−0.01	0.21
113	161	0.200	0.06	42.5	−0.23	0.175	0.04	30.0	0.02	0.150	0.06	0.0	−0.48	0.26
$Z = 49$ (In)														
103	152	0.250	0.02	60.0	2.25	0.200	0.00	42.5	2.46	0.250	0.02	0.0	0.78	0.22
104	153	0.250	0.02	60.0	2.10	0.200	0.00	42.5	2.42	0.250	0.02	0.0	0.95	0.33
105	154	0.250	0.02	60.0	1.75	0.275	0.02	45.0	2.09	0.250	0.04	0.0	0.80	0.34
106	155	0.250	0.02	60.0	1.65	0.275	0.02	42.5	2.07	0.225	0.04	0.0	0.89	0.41
107	156	0.275	0.04	60.0	1.30	0.275	0.02	42.5	1.81	0.225	0.04	0.0	0.73	0.51
108	157	0.275	0.04	60.0	1.32	0.200	0.02	42.5	1.70	0.200	0.04	0.0	0.77	0.39
$Z = 50$ (Sn)														
105	155	0.175	−0.02	60.0	2.04	0.150	−0.02	40.0	2.26	0.225	0.02	0.0	0.72	0.22
107	157	0.275	0.04	60.0	1.65	0.225	0.02	60.0	1.88	0.225	0.04	0.0	0.75	0.23
$Z = 51$ (Sb)														
105	156	0.175	−0.02	60.0	1.89	0.175	−0.02	40.0	2.10	0.225	0.02	0.0	0.62	0.21
119	170	0.125	0.02	52.5	−4.48	0.125	0.04	32.5	−4.22	0.100	0.02	30.0	−4.62	0.25
120	171	0.425	0.02	15.0	4.82	0.375	0.02	22.5	5.07	0.075	0.02	30.0	−5.19	0.25
121	172	0.425	0.02	15.0	4.57	0.375	0.02	22.5	4.97	0.075	0.02	30.0	−6.36	0.39
$Z = 52$ (Te)														
65	117	0.150	−0.02	60.0	1.99	0.175	−0.02	32.5	2.19	0.200	−0.02	0.0	1.88	0.20
67	119	0.200	0.00	2.5	1.83	0.150	−0.02	20.0	2.11	0.175	0.00	60.0	1.62	0.27
119	171	0.125	0.02	55.0	−3.95	0.100	0.02	35.0	−3.60	0.100	0.04	15.0	−4.04	0.36
120	172	0.425	0.02	17.5	4.82	0.350	0.02	25.0	5.31	0.075	0.02	30.0	−4.52	0.48
121	173	0.425	0.02	17.5	4.58	0.375	0.02	25.0	5.08	0.075	0.02	30.0	−5.69	0.50
123	175	0.425	0.02	17.5	4.47	0.400	0.02	25.0	4.88	0.050	0.02	52.5	−7.86	0.42
124	176	0.425	0.02	17.5	4.58	0.400	0.02	25.0	4.81	0.050	0.02	60.0	−8.75	0.23
$Z = 53$ (I)														
95	148	0.350	0.04	60.0	4.80	0.300	0.00	60.0	5.07	0.200	−0.06	7.5	0.09	0.27
118	171	0.400	0.00	15.0	5.03	0.375	0.02	25.0	5.25	0.100	0.04	0.0	−2.77	0.23
119	172	0.400	0.02	15.0	4.77	0.375	0.02	25.0	5.21	0.125	0.02	55.0	−3.55	0.44
		0.400	0.02	15.0	4.77	0.375	0.02	25.0	5.21	0.100	0.04	15.0	−3.66	0.44
		0.125	0.02	55.0	−3.55	0.100	0.02	32.5	−3.18	0.100	0.04	15.0	−3.66	0.37
120	173	0.425	0.02	17.5	4.73	0.375	0.02	27.5	5.26	0.125	0.02	60.0	−4.09	0.53
		0.425	0.02	17.5	4.73	0.375	0.02	27.5	5.26	0.100	0.02	30.0	−4.17	0.53
		0.125	0.02	60.0	−4.09	0.100	0.02	42.5	−3.81	0.100	0.02	30.0	−4.17	0.27
124	177	0.425	0.02	17.5	4.50	0.400	0.02	27.5	4.89	0.050	0.02	60.0	−8.17	0.39
125	178	0.425	0.02	20.0	4.32	0.400	0.02	27.5	4.62	0.000	0.00	0.0	−9.76	0.30
$Z = 54$ (Xe)														
53	107	0.400	0.06	50.0	3.77	0.350	0.02	47.5	3.97	0.125	−0.06	7.5	−2.73	0.21
117	171	0.400	0.00	17.5	5.05	0.375	0.02	25.0	5.36	0.125	0.04	0.0	−1.63	0.31
118	172	0.400	0.00	15.0	5.05	0.375	0.00	25.0	5.52	0.100	0.04	0.0	−2.08	0.47

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 54$ (Xe)														
119	173	0.400	0.02	15.0	4.79	0.375	0.00	25.0	5.47	0.100	0.04	0.0	−2.95	0.68
120	174	0.425	0.02	15.0	4.76	0.375	0.00	25.0	5.55	0.125	0.02	60.0	−3.35	0.79
		0.425	0.02	15.0	4.76	0.375	0.00	25.0	5.55	0.100	0.02	30.0	−3.42	0.79
		0.125	0.02	60.0	−3.35	0.100	0.02	32.5	−3.02	0.100	0.02	30.0	−3.42	0.33
121	175	0.425	0.02	15.0	4.53	0.375	0.00	25.0	5.45	0.125	0.02	60.0	−4.39	0.92
		0.425	0.02	15.0	4.53	0.375	0.00	25.0	5.45	0.100	0.02	30.0	−4.49	0.92
		0.125	0.02	60.0	−4.39	0.075	0.02	32.5	−4.16	0.100	0.02	30.0	−4.49	0.23
122	176	0.425	0.02	15.0	4.64	0.375	0.00	25.0	5.47	0.075	0.02	30.0	−5.04	0.83
123	177	0.425	0.02	17.5	4.43	0.400	0.00	27.5	5.24	0.050	0.02	50.0	−6.36	0.81
124	178	0.425	0.04	15.0	4.56	0.400	0.02	27.5	5.16	0.050	0.02	60.0	−7.26	0.60
125	179	0.425	0.02	20.0	4.41	0.400	0.02	27.5	4.88	0.000	0.00	0.0	−8.87	0.47
126	180	0.425	0.04	17.5	4.56	0.400	0.02	27.5	4.78	0.000	0.00	0.0	−9.65	0.22
$Z = 55$ (Cs)														
53	108	0.400	0.04	50.0	3.58	0.350	0.02	47.5	3.91	0.125	−0.04	0.0	−1.93	0.33
54	109	0.425	0.06	50.0	3.69	0.350	0.02	47.5	4.02	0.150	−0.04	0.0	−1.33	0.34
55	110	0.425	0.06	50.0	3.70	0.350	0.02	45.0	4.11	0.150	−0.04	0.0	−0.68	0.40
56	111	0.425	0.06	50.0	3.89	0.375	0.02	47.5	4.18	0.175	−0.02	0.0	−0.11	0.29
81	136	0.425	0.04	5.0	7.09	0.400	0.02	12.5	7.48	0.050	0.00	0.0	−5.67	0.38
116	171	0.375	0.02	15.0	5.23	0.350	0.04	12.5	5.51	0.150	0.04	0.0	−0.76	0.28
117	172	0.400	0.02	12.5	5.00	0.350	0.02	10.0	5.58	0.125	0.04	0.0	−1.34	0.58
118	173	0.400	0.02	12.5	4.91	0.325	0.04	5.0	5.51	0.125	0.04	0.0	−1.69	0.59
119	174	0.400	0.02	12.5	4.64	0.325	0.04	0.0	5.57	0.100	0.04	0.0	−2.58	0.93
120	175	0.400	0.02	12.5	4.68	0.325	0.02	0.0	5.74	0.100	0.04	20.0	−2.97	1.05
121	176	0.425	0.02	15.0	4.44	0.375	0.00	27.5	5.56	0.125	0.02	60.0	−3.93	1.12
		0.425	0.02	15.0	4.44	0.375	0.00	27.5	5.56	0.100	0.04	30.0	−4.03	1.12
		0.125	0.02	60.0	−3.93	0.075	0.02	35.0	−3.66	0.100	0.04	30.0	−4.03	0.27
122	177	0.425	0.04	15.0	4.51	0.375	0.00	27.5	5.57	0.075	0.02	30.0	−4.55	1.06
123	178	0.425	0.04	15.0	4.30	0.375	0.00	27.5	5.40	0.075	0.02	57.5	−5.85	1.09
124	179	0.425	0.04	15.0	4.41	0.375	0.00	27.5	5.33	0.050	0.02	60.0	−6.75	0.93
125	180	0.425	0.04	15.0	4.29	0.375	0.00	27.5	5.09	0.000	0.00	0.0	−8.33	0.80
126	181	0.425	0.04	15.0	4.42	0.400	0.00	25.0	4.96	0.000	0.00	0.0	−9.08	0.54
127	182	0.425	0.04	17.5	4.36	0.425	0.02	25.0	4.67	0.025	0.00	42.5	−8.19	0.31
129	184	0.425	0.08	2.5	4.19	0.425	0.06	15.0	4.41	0.025	0.00	25.0	−6.16	0.22
130	185	0.425	0.08	2.5	4.21	0.400	0.04	15.0	4.54	0.000	0.00	0.0	−4.90	0.33
$Z = 56$ (Ba)														
53	109	0.400	0.04	50.0	3.71	0.350	0.02	47.5	4.00	0.150	−0.04	7.5	−1.16	0.29
54	110	0.425	0.06	50.0	3.78	0.350	0.02	45.0	4.13	0.150	−0.04	0.0	−0.58	0.35
79	135	0.425	0.04	0.0	6.45	0.375	0.04	0.0	6.86	0.100	0.02	32.5	−2.21	0.40
81	137	0.425	0.04	0.0	6.49	0.375	0.02	0.0	6.91	0.050	0.00	0.0	−4.73	0.42
82	138	0.425	0.04	0.0	6.72	0.375	0.02	0.0	6.95	0.000	0.00	0.0	−6.11	0.23
117	173	0.375	0.00	7.5	5.00	0.350	0.02	5.0	5.35	0.150	0.04	0.0	−1.02	0.35
118	174	0.375	0.00	7.5	4.95	0.350	0.02	5.0	5.44	0.125	0.04	0.0	−1.26	0.49
119	175	0.400	0.02	10.0	4.67	0.325	0.02	0.0	5.40	0.100	0.04	0.0	−1.99	0.74
120	176	0.400	0.02	10.0	4.72	0.325	0.02	0.0	5.52	0.100	0.04	12.5	−2.34	0.80
121	177	0.400	0.02	10.0	4.56	0.300	0.02	0.0	5.41	0.125	0.02	60.0	−3.20	0.85
		0.400	0.02	10.0	4.56	0.300	0.02	0.0	5.41	0.100	0.04	30.0	−3.37	0.85
		0.125	0.02	60.0	−3.20	0.100	0.02	37.5	−2.98	0.100	0.04	30.0	−3.37	0.23
122	178	0.425	0.04	12.5	4.63	0.300	0.02	0.0	5.54	0.075	0.02	30.0	−3.84	0.91
123	179	0.425	0.04	12.5	4.43	0.300	0.00	0.0	5.56	0.075	0.02	57.5	−5.13	1.13
124	180	0.425	0.04	12.5	4.53	0.300	−0.02	0.0	5.58	0.050	0.02	60.0	−6.01	1.06

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 56$ (Ba)														
125	181	0.425	0.04	12.5	4.40	0.375	0.00	27.5	5.36	0.000	0.00	0.0	−7.55	0.97
126	182	0.425	0.06	12.5	4.54	0.375	0.00	27.5	5.24	0.000	0.00	0.0	−8.21	0.69
127	183	0.425	0.06	10.0	4.35	0.400	0.02	27.5	4.92	0.025	0.00	60.0	−7.41	0.58
128	184	0.400	0.06	0.0	4.44	0.400	0.02	25.0	4.88	0.000	0.00	0.0	−6.32	0.44
129	185	0.400	0.06	0.0	4.21	0.425	0.04	20.0	4.64	0.025	0.00	47.5	−5.36	0.43
130	186	0.425	0.08	0.0	4.16	0.400	0.04	20.0	4.74	0.000	0.00	0.0	−4.10	0.57
131	187	0.425	0.08	0.0	3.88	0.425	0.06	17.5	4.56	0.375	0.02	52.5	2.28	0.69
		0.425	0.08	0.0	3.88	0.425	0.06	17.5	4.56	0.075	−0.04	0.0	−3.37	0.69
		0.375	0.02	52.5	2.28	0.300	−0.02	47.5	2.65	0.075	−0.04	0.0	−3.37	0.37
132	188	0.425	0.08	0.0	3.94	0.375	0.02	17.5	4.55	0.375	0.02	52.5	2.42	0.61
		0.425	0.08	0.0	3.94	0.375	0.02	17.5	4.55	0.100	−0.04	0.0	−2.53	0.61
		0.375	0.02	52.5	2.42	0.300	−0.02	47.5	2.93	0.100	−0.04	0.0	−2.53	0.50
133	189	0.425	0.08	0.0	3.68	0.375	0.04	17.5	4.27	0.375	0.02	52.5	2.25	0.59
		0.425	0.08	0.0	3.68	0.375	0.04	17.5	4.27	0.125	−0.06	0.0	−2.13	0.59
		0.375	0.02	52.5	2.25	0.300	−0.02	45.0	2.99	0.125	−0.06	0.0	−2.13	0.74
$Z = 57$ (La)														
53	110	0.425	0.06	50.0	3.76	0.375	0.02	47.5	3.98	0.175	−0.04	5.0	−0.63	0.23
78	135	0.425	0.06	0.0	5.96	0.375	0.04	0.0	6.19	0.125	0.02	27.5	−0.72	0.22
79	136	0.425	0.04	0.0	5.80	0.375	0.04	0.0	6.34	0.125	0.02	30.0	−1.59	0.54
80	137	0.425	0.04	0.0	5.87	0.375	0.02	0.0	6.47	0.050	0.00	15.0	−2.73	0.61
81	138	0.425	0.04	0.0	5.86	0.375	0.02	0.0	6.45	0.425	0.04	60.0	4.23	0.59
		0.425	0.04	0.0	5.86	0.375	0.02	0.0	6.45	0.050	0.00	0.0	−3.94	0.59
		0.425	0.04	60.0	4.23	0.350	0.02	60.0	4.52	0.050	0.00	0.0	−3.94	0.29
82	139	0.425	0.04	0.0	6.06	0.375	0.02	−2.5	6.49	0.425	0.04	60.0	4.45	0.42
		0.425	0.04	0.0	6.06	0.375	0.02	−2.5	6.49	0.000	0.00	0.0	−5.28	0.42
		0.425	0.04	60.0	4.45	0.375	0.02	60.0	4.72	0.000	0.00	0.0	−5.28	0.28
83	140	0.425	0.04	0.0	6.15	0.375	0.02	2.5	6.38	0.425	0.04	52.5	4.57	0.23
		0.425	0.04	0.0	6.15	0.375	0.02	2.5	6.38	0.050	−0.02	0.0	−4.35	0.23
		0.425	0.04	52.5	4.57	0.375	0.02	55.0	4.84	0.050	−0.02	0.0	−4.35	0.27
104	161	0.400	0.06	47.5	4.39	0.350	0.02	42.5	4.63	0.250	0.02	0.0	0.54	0.24
117	174	0.375	0.02	5.0	4.67	0.350	0.00	−2.5	5.06	0.150	0.04	0.0	−0.81	0.39
118	175	0.375	0.00	5.0	4.65	0.350	0.02	0.0	5.09	0.125	0.04	0.0	−1.00	0.45
119	176	0.375	0.00	5.0	4.40	0.325	0.02	0.0	5.09	0.100	0.04	0.0	−1.63	0.69
120	177	0.375	0.02	2.5	4.43	0.325	0.02	0.0	5.20	0.100	0.04	0.0	−1.98	0.77
121	178	0.375	0.02	0.0	4.24	0.300	0.02	0.0	5.15	0.100	0.04	30.0	−2.95	0.90
122	179	0.375	0.02	0.0	4.32	0.300	0.00	0.0	5.28	0.100	0.02	30.0	−3.46	0.96
123	180	0.375	0.02	0.0	4.19	0.300	0.00	0.0	5.24	0.075	0.02	57.5	−4.69	1.05
124	181	0.375	0.02	0.0	4.30	0.300	−0.02	0.0	5.25	0.050	0.02	60.0	−5.59	0.96
125	182	0.400	0.04	0.0	4.18	0.300	−0.02	0.0	5.12	0.000	0.00	0.0	−7.04	0.93
126	183	0.400	0.04	0.0	4.22	0.300	−0.02	0.0	5.06	0.000	0.00	0.0	−7.74	0.84
127	184	0.400	0.04	0.0	4.04	0.325	0.00	0.0	4.95	0.025	0.00	35.0	−6.92	0.91
128	185	0.400	0.06	0.0	4.08	0.325	0.00	0.0	4.99	0.000	0.00	0.0	−5.84	0.91
129	186	0.400	0.06	0.0	3.84	0.425	0.04	22.5	4.82	0.025	0.00	60.0	−4.87	0.98
130	187	0.400	0.06	0.0	3.85	0.400	0.04	22.5	4.88	0.025	0.00	2.5	−3.61	1.02
131	188	0.425	0.08	0.0	3.60	0.375	0.02	20.0	4.61	0.075	−0.02	0.0	−2.81	1.01
132	189	0.425	0.08	0.0	3.65	0.375	0.02	20.0	4.54	0.375	0.02	52.5	2.54	0.89
		0.425	0.08	0.0	3.65	0.375	0.02	20.0	4.54	0.100	−0.04	0.0	−2.01	0.89
		0.375	0.02	52.5	2.54	0.300	−0.02	47.5	2.90	0.100	−0.04	0.0	−2.01	0.36
133	190	0.425	0.08	0.0	3.40	0.375	0.02	20.0	4.24	0.375	0.02	52.5	2.37	0.84
		0.425	0.08	0.0	3.40	0.375	0.02	20.0	4.24	0.125	−0.06	0.0	−1.60	0.84

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 57$ (La)														
133	190	0.375	0.02	52.5	2.37	0.300	−0.02	47.5	2.99	0.125	−0.06	0.0	−1.60	0.62
134	191	0.400	0.08	0.0	3.50	0.350	0.02	15.0	4.36	0.375	0.02	50.0	2.58	0.87
		0.400	0.08	0.0	3.50	0.350	0.02	15.0	4.36	0.125	−0.08	0.0	−1.11	0.87
		0.375	0.02	50.0	2.58	0.325	0.00	42.5	3.27	0.125	−0.08	0.0	−1.11	0.70
135	192	0.400	0.08	0.0	3.27	0.350	0.02	15.0	4.04	0.375	0.04	47.5	2.49	0.78
		0.400	0.08	0.0	3.27	0.350	0.02	15.0	4.04	0.150	−0.08	0.0	−1.32	0.78
		0.375	0.04	47.5	2.49	0.300	−0.02	40.0	3.11	0.150	−0.08	0.0	−1.32	0.62
$Z = 58$ (Ce)														
79	137	0.425	0.04	0.0	5.40	0.375	0.04	0.0	5.69	0.125	0.02	30.0	−1.02	0.29
80	138	0.425	0.04	0.0	5.46	0.375	0.02	0.0	5.79	0.050	0.00	15.0	−2.08	0.33
81	139	0.425	0.04	0.0	5.47	0.375	0.02	0.0	5.77	0.425	0.04	60.0	4.23	0.30
		0.425	0.04	0.0	5.47	0.375	0.02	0.0	5.77	0.050	0.00	0.0	−3.28	0.30
		0.425	0.04	60.0	4.23	0.350	0.02	60.0	4.67	0.050	0.00	0.0	−3.28	0.45
82	140	0.425	0.04	60.0	4.46	0.375	0.02	60.0	4.83	0.000	0.00	0.0	−4.64	0.37
83	141	0.425	0.04	55.0	4.68	0.375	0.02	62.5	5.00	0.025	0.00	57.5	−3.70	0.32
84	142	0.425	0.04	55.0	5.01	0.375	0.02	60.0	5.22	0.050	0.00	15.0	−2.54	0.21
117	175	0.375	0.02	0.0	4.36	0.350	0.02	0.0	4.64	0.150	0.04	0.0	−0.46	0.28
118	176	0.375	0.00	0.0	4.32	0.325	0.02	0.0	4.76	0.150	0.06	0.0	−0.61	0.44
119	177	0.375	0.02	0.0	4.10	0.325	0.02	0.0	4.79	0.125	0.04	0.0	−1.16	0.69
120	178	0.375	0.02	0.0	4.13	0.325	0.00	0.0	4.91	0.100	0.04	7.5	−1.46	0.78
121	179	0.375	0.02	0.0	3.97	0.300	0.02	0.0	4.93	0.100	0.04	27.5	−2.39	0.96
122	180	0.375	0.02	0.0	4.06	0.300	0.00	0.0	5.01	0.100	0.02	30.0	−2.88	0.96
123	181	0.375	0.02	0.0	3.93	0.300	−0.02	0.0	4.98	0.075	0.02	52.5	−4.10	1.04
124	182	0.375	0.02	0.0	4.05	0.300	−0.02	0.0	4.95	0.050	0.02	60.0	−4.99	0.89
125	183	0.375	0.02	0.0	3.93	0.300	−0.02	0.0	4.80	0.000	0.00	0.0	−6.49	0.88
126	184	0.375	0.02	0.0	4.06	0.300	−0.02	0.0	4.75	0.000	0.00	0.0	−7.19	0.69
127	185	0.375	0.02	0.0	3.97	0.300	−0.02	0.0	4.57	0.000	0.00	0.0	−6.32	0.60
128	186	0.375	0.04	0.0	3.99	0.325	0.00	0.0	4.65	0.000	0.00	0.0	−5.26	0.66
129	187	0.375	0.04	0.0	3.78	0.325	0.00	0.0	4.52	0.025	0.00	30.0	−4.23	0.74
130	188	0.375	0.04	0.0	3.83	0.325	0.00	0.0	4.52	0.000	0.00	0.0	−3.01	0.69
131	189	0.375	0.04	0.0	3.60	0.325	0.00	0.0	4.36	0.075	−0.02	0.0	−2.12	0.76
132	190	0.375	0.04	0.0	3.65	0.350	0.02	0.0	4.43	0.375	0.02	55.0	2.92	0.78
		0.375	0.04	0.0	3.65	0.350	0.02	0.0	4.43	0.100	−0.04	0.0	−1.34	0.78
		0.375	0.02	55.0	2.92	0.325	0.00	50.0	3.19	0.100	−0.04	0.0	−1.34	0.27
133	191	0.375	0.06	0.0	3.40	0.350	0.04	0.0	4.28	0.375	0.02	52.5	2.76	0.87
		0.375	0.06	0.0	3.40	0.350	0.04	0.0	4.28	0.100	−0.06	2.5	−0.89	0.87
		0.375	0.02	52.5	2.76	0.325	0.00	45.0	3.29	0.100	−0.06	2.5	−0.89	0.53
134	192	0.375	0.06	0.0	3.45	0.350	0.04	0.0	4.26	0.375	0.02	52.5	2.93	0.81
		0.375	0.06	0.0	3.45	0.350	0.04	0.0	4.26	0.150	−0.08	0.0	−0.56	0.81
		0.375	0.02	52.5	2.93	0.325	0.00	45.0	3.53	0.150	−0.08	0.0	−0.56	0.60
135	193	0.375	0.06	0.0	3.22	0.350	0.04	0.0	4.03	0.375	0.04	47.5	2.94	0.82
		0.375	0.06	0.0	3.22	0.350	0.04	0.0	4.03	0.150	−0.08	0.0	−0.79	0.82
		0.375	0.04	47.5	2.94	0.325	0.00	40.0	3.48	0.150	−0.08	0.0	−0.79	0.55
136	194	0.375	0.06	0.0	3.37	0.350	0.04	0.0	4.04	0.375	0.04	45.0	3.05	0.66
		0.375	0.06	0.0	3.37	0.350	0.04	0.0	4.04	0.175	−0.10	0.0	−0.80	0.66
		0.375	0.04	45.0	3.05	0.325	0.00	37.5	3.55	0.175	−0.10	0.0	−0.80	0.50
137	195	0.375	0.06	0.0	3.30	0.350	0.04	0.0	3.81	0.175	−0.10	0.0	−1.19	0.51
$Z = 59$ (Pr)														
60	119	0.275	−0.06	57.5	3.29	0.275	−0.04	47.5	3.56	0.275	−0.04	0.0	−0.23	0.26
61	120	0.275	−0.06	57.5	3.64	0.275	−0.04	47.5	3.89	0.275	−0.04	0.0	−0.06	0.25

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 59$ (Pr)														
62	121	0.275	−0.04	57.5	3.79	0.275	−0.04	47.5	4.03	0.300	−0.02	0.0	0.14	0.24
79	138	0.425	0.04	0.0	4.87	0.375	0.04	0.0	5.14	0.125	0.02	17.5	−0.52	0.28
80	139	0.425	0.04	0.0	4.93	0.375	0.02	0.0	5.26	0.425	0.04	60.0	4.13	0.33
		0.425	0.04	0.0	4.93	0.375	0.02	0.0	5.26	0.075	0.02	0.0	−1.47	0.33
		0.425	0.04	60.0	4.13	0.350	0.02	60.0	4.41	0.075	0.02	0.0	−1.47	0.28
81	140	0.425	0.04	0.0	4.94	0.375	0.02	0.0	5.26	0.425	0.04	60.0	4.00	0.31
		0.425	0.04	0.0	4.94	0.375	0.02	0.0	5.26	0.050	0.00	2.5	−2.65	0.31
		0.425	0.04	60.0	4.00	0.350	0.02	60.0	4.58	0.050	0.00	2.5	−2.65	0.57
82	141	0.425	0.04	60.0	4.21	0.375	0.02	60.0	4.72	0.000	0.00	0.0	−4.01	0.51
95	154	0.375	0.02	60.0	5.56	0.350	0.02	55.0	5.81	0.250	−0.06	0.0	−0.47	0.24
96	155	0.375	0.02	60.0	5.66	0.375	0.04	52.5	5.93	0.250	−0.04	0.0	−0.25	0.27
97	156	0.400	0.04	60.0	5.56	0.375	0.04	52.5	5.79	0.250	−0.04	0.0	−0.41	0.22
106	165	0.400	0.08	60.0	4.92	0.350	0.04	60.0	5.21	0.250	0.02	0.0	0.28	0.29
117	176	0.375	0.02	0.0	4.05	0.350	0.02	0.0	4.28	0.150	0.06	0.0	−0.23	0.23
118	177	0.375	0.02	0.0	4.03	0.325	0.02	0.0	4.40	0.150	0.06	0.0	−0.38	0.37
119	178	0.375	0.02	0.0	3.81	0.300	0.02	0.0	4.43	0.125	0.04	0.0	−0.82	0.62
120	179	0.375	0.02	0.0	3.84	0.300	0.02	0.0	4.60	0.150	0.02	60.0	−1.00	0.76
		0.375	0.02	0.0	3.84	0.300	0.02	0.0	4.60	0.100	0.04	7.5	−1.09	0.76
		0.150	0.02	60.0	−1.00	0.125	0.04	37.5	−0.79	0.100	0.04	7.5	−1.09	0.20
121	180	0.375	0.02	0.0	3.70	0.300	0.02	0.0	4.66	0.100	0.04	27.5	−2.01	0.96
122	181	0.375	0.02	0.0	3.79	0.300	0.00	0.0	4.70	0.100	0.02	30.0	−2.50	0.91
123	182	0.375	0.02	0.0	3.68	0.300	0.00	0.0	4.67	0.075	0.02	52.5	−3.75	0.99
124	183	0.375	0.02	0.0	3.80	0.300	−0.02	0.0	4.65	0.050	0.02	60.0	−4.62	0.86
125	184	0.375	0.02	0.0	3.68	0.300	−0.02	0.0	4.51	0.000	0.00	0.0	−6.03	0.83
126	185	0.375	0.02	0.0	3.81	0.300	−0.02	0.0	4.46	0.000	0.00	0.0	−6.71	0.64
127	186	0.375	0.04	0.0	3.66	0.300	−0.02	0.0	4.28	0.025	0.00	57.5	−5.88	0.61
128	187	0.375	0.04	0.0	3.71	0.300	−0.02	0.0	4.21	0.000	0.00	0.0	−4.76	0.50
129	188	0.375	0.04	0.0	3.51	0.325	0.00	0.0	4.15	0.025	0.00	55.0	−3.79	0.64
130	189	0.375	0.04	0.0	3.55	0.350	0.02	0.0	4.24	0.025	0.00	2.5	−2.50	0.68
131	190	0.375	0.04	0.0	3.33	0.350	0.02	0.0	4.07	0.075	−0.02	0.0	−1.67	0.74
132	191	0.375	0.06	0.0	3.39	0.350	0.02	0.0	4.10	0.100	−0.06	0.0	−0.89	0.71
133	192	0.375	0.02	55.0	2.88	0.350	0.02	0.0	3.94	0.375	0.06	0.0	3.11	0.82
		0.375	0.02	55.0	2.88	0.325	−0.02	50.0	3.34	0.125	−0.06	0.0	−0.61	0.46
		0.375	0.06	0.0	3.11	0.350	0.02	0.0	3.94	0.125	−0.06	0.0	−0.61	0.82
134	193	0.375	0.02	55.0	3.04	0.350	0.04	0.0	3.95	0.375	0.06	0.0	3.16	0.79
		0.375	0.02	55.0	3.04	0.350	0.02	47.5	3.63	0.150	−0.08	0.0	−0.27	0.59
		0.375	0.06	0.0	3.16	0.350	0.04	0.0	3.95	0.150	−0.08	0.0	−0.27	0.79
135	194	0.375	0.02	60.0	2.81	0.350	0.04	0.0	3.73	0.375	0.06	0.0	2.93	0.79
		0.375	0.02	60.0	2.81	0.350	0.02	42.5	3.56	0.175	−0.08	0.0	−0.66	0.75
		0.375	0.06	0.0	2.93	0.350	0.04	0.0	3.73	0.175	−0.08	0.0	−0.66	0.79
136	195	0.375	0.02	60.0	2.94	0.350	0.04	0.0	3.73	0.375	0.06	0.0	3.08	0.65
		0.375	0.02	60.0	2.94	0.375	0.04	47.5	3.35	0.175	−0.10	0.0	−0.65	0.41
		0.375	0.06	0.0	3.08	0.350	0.04	0.0	3.73	0.175	−0.10	0.0	−0.65	0.65
137	196	0.400	0.02	60.0	2.70	0.350	0.04	0.0	3.52	0.375	0.06	0.0	3.02	0.50
		0.400	0.02	60.0	2.70	0.400	0.04	55.0	2.92	0.175	−0.10	0.0	−1.05	0.23
		0.375	0.06	0.0	3.02	0.350	0.04	0.0	3.52	0.175	−0.10	0.0	−1.05	0.50
138	197	0.400	0.04	60.0	2.78	0.350	0.04	0.0	3.54	0.375	0.06	0.0	3.22	0.32
		0.400	0.04	60.0	2.78	0.400	0.04	55.0	3.00	0.200	−0.08	0.0	−0.99	0.22
		0.375	0.06	0.0	3.22	0.350	0.04	0.0	3.54	0.200	−0.08	0.0	−0.99	0.32
139	198	0.400	0.04	60.0	2.49	0.400	0.06	55.0	2.75	0.200	−0.08	0.0	−1.36	0.26

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 60$ (Nd)														
60	120	0.275	−0.06	60.0	3.35	0.275	−0.04	45.0	3.76	0.300	−0.04	0.0	−0.63	0.40
61	121	0.300	−0.04	60.0	3.67	0.275	−0.04	47.5	4.09	0.300	−0.04	0.0	−0.49	0.42
62	122	0.300	−0.04	60.0	3.88	0.275	−0.04	45.0	4.25	0.300	−0.02	0.0	−0.34	0.37
63	123	0.275	−0.04	60.0	4.22	0.275	−0.04	47.5	4.44	0.300	−0.02	0.0	−0.14	0.21
80	140	0.425	0.04	0.0	4.78	0.375	0.02	0.0	5.04	0.425	0.04	60.0	4.26	0.26
		0.425	0.04	0.0	4.78	0.375	0.02	0.0	5.04	0.000	0.00	0.0	−1.08	0.26
		0.425	0.04	60.0	4.26	0.350	0.02	60.0	4.50	0.000	0.00	0.0	−1.08	0.24
81	141	0.425	0.04	0.0	4.79	0.375	0.02	0.0	5.03	0.425	0.04	60.0	4.13	0.24
		0.425	0.04	0.0	4.79	0.375	0.02	0.0	5.03	0.050	0.00	0.0	−2.25	0.24
		0.425	0.04	60.0	4.13	0.375	0.02	60.0	4.59	0.050	0.00	0.0	−2.25	0.46
97	157	0.400	0.04	60.0	5.79	0.325	0.00	60.0	6.01	0.250	−0.04	0.0	−0.59	0.22
106	166	0.400	0.08	60.0	5.16	0.400	0.06	52.5	5.38	0.250	0.02	0.0	0.11	0.21
118	178	0.375	0.00	0.0	3.97	0.350	0.00	0.0	4.20	0.150	0.06	0.0	−0.20	0.23
119	179	0.375	0.00	0.0	3.77	0.325	0.02	0.0	4.24	0.125	0.04	0.0	−0.51	0.47
120	180	0.375	0.02	0.0	3.83	0.325	0.00	0.0	4.32	0.150	0.02	60.0	−0.70	0.50
		0.375	0.02	0.0	3.83	0.325	0.00	0.0	4.32	0.100	0.04	0.0	−0.69	0.50
		0.150	0.02	60.0	−0.70	0.125	0.02	37.5	−0.44	0.100	0.04	0.0	−0.69	0.25
121	181	0.375	0.02	0.0	3.69	0.300	0.00	0.0	4.39	0.100	0.04	25.0	−1.58	0.70
122	182	0.375	0.02	0.0	3.80	0.300	0.00	0.0	4.41	0.100	0.02	30.0	−2.08	0.61
123	183	0.375	0.02	0.0	3.69	0.300	0.00	0.0	4.37	0.075	0.02	57.5	−3.33	0.68
124	184	0.375	0.02	0.0	3.82	0.300	−0.02	0.0	4.35	0.050	0.02	60.0	−4.17	0.52
125	185	0.375	0.02	0.0	3.71	0.275	−0.02	0.0	4.17	0.000	0.00	0.0	−5.63	0.46
126	186	0.375	0.02	0.0	3.85	0.350	0.00	0.0	4.31	0.000	0.00	0.0	−6.29	0.46
127	187	0.375	0.02	0.0	3.77	0.350	0.02	0.0	4.19	0.000	0.00	0.0	−5.39	0.42
128	188	0.375	0.04	0.0	3.78	0.350	0.02	0.0	4.25	0.000	0.00	0.0	−4.33	0.48
129	189	0.375	0.04	0.0	3.56	0.350	0.02	0.0	4.12	0.025	0.00	57.5	−3.28	0.55
130	190	0.375	0.04	0.0	3.62	0.350	0.02	0.0	4.15	0.000	0.00	0.0	−2.05	0.53
131	191	0.375	0.04	0.0	3.39	0.350	0.02	0.0	3.98	0.075	−0.04	0.0	−1.17	0.59
132	192	0.375	0.06	0.0	3.47	0.350	0.02	0.0	4.02	0.100	−0.06	0.0	−0.38	0.54
133	193	0.375	0.02	55.0	3.31	0.350	0.02	0.0	3.85	0.375	0.06	0.0	3.19	0.54
		0.375	0.02	55.0	3.31	0.350	0.00	55.0	3.53	0.125	−0.06	0.0	−0.13	0.21
		0.375	0.06	0.0	3.19	0.350	0.02	0.0	3.85	0.125	−0.06	0.0	−0.13	0.65
134	194	0.375	0.02	57.5	3.43	0.325	0.00	50.0	3.91	0.375	0.06	0.0	3.25	0.49
		0.375	0.02	57.5	3.43	0.325	0.00	50.0	3.91	0.150	−0.08	0.0	0.18	0.49
		0.375	0.06	0.0	3.25	0.350	0.04	0.0	3.87	0.150	−0.08	0.0	0.18	0.62
135	195	0.375	0.02	60.0	3.24	0.375	0.04	47.5	3.68	0.375	0.06	0.0	3.02	0.44
		0.375	0.02	60.0	3.24	0.375	0.04	47.5	3.68	0.175	−0.08	0.0	−0.25	0.44
		0.375	0.06	0.0	3.02	0.350	0.04	0.0	3.65	0.175	−0.08	0.0	−0.25	0.63
136	196	0.375	0.02	60.0	3.37	0.375	0.04	50.0	3.74	0.375	0.06	0.0	3.18	0.37
		0.375	0.02	60.0	3.37	0.375	0.04	50.0	3.74	0.175	−0.08	0.0	−0.25	0.37
		0.375	0.06	0.0	3.18	0.350	0.04	0.0	3.68	0.175	−0.08	0.0	−0.25	0.50
137	197	0.400	0.02	60.0	3.12	0.375	0.04	52.5	3.52	0.375	0.06	0.0	3.11	0.40
		0.400	0.02	60.0	3.12	0.375	0.04	52.5	3.52	0.175	−0.08	0.0	−0.63	0.40
		0.375	0.06	0.0	3.11	0.350	0.04	0.0	3.46	0.175	−0.08	0.0	−0.63	0.35
138	198	0.400	0.04	60.0	3.20	0.400	0.06	52.5	3.56	0.200	−0.08	0.0	−0.66	0.35
139	199	0.400	0.04	60.0	2.91	0.400	0.06	52.5	3.25	0.200	−0.08	0.0	−1.04	0.34
140	200	0.400	0.04	60.0	2.98	0.400	0.06	52.5	3.31	0.200	−0.08	0.0	−0.92	0.33
141	201	0.400	0.06	60.0	2.68	0.400	0.06	50.0	3.11	0.225	−0.06	0.0	−1.42	0.42
$Z = 61$ (Pm)														
59	120	0.300	−0.04	57.5	3.42	0.275	−0.04	45.0	3.65	0.300	−0.02	0.0	−0.59	0.24

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 61$ (Pm)														
60	121	0.300	−0.04	60.0	3.38	0.300	−0.04	45.0	3.88	0.300	−0.04	0.0	−0.84	0.50
61	122	0.300	−0.04	60.0	3.60	0.300	−0.04	45.0	4.15	0.300	−0.02	0.0	−0.77	0.55
62	123	0.300	−0.04	60.0	3.82	0.300	−0.04	45.0	4.34	0.300	−0.02	0.0	−0.65	0.53
63	124	0.300	−0.04	60.0	4.24	0.300	−0.02	47.5	4.51	0.300	−0.02	0.0	−0.45	0.27
81	142	0.425	0.04	60.0	4.23	0.375	0.02	60.0	4.56	0.050	0.02	0.0	−1.79	0.33
119	180	0.375	0.00	0.0	3.59	0.325	0.02	0.0	3.97	0.150	0.04	17.5	−0.29	0.38
120	181	0.375	0.02	0.0	3.67	0.325	0.00	0.0	4.06	0.150	0.02	60.0	−0.56	0.38
121	182	0.375	0.02	0.0	3.56	0.300	0.02	0.0	4.13	0.125	0.02	60.0	−1.34	0.57
122	183	0.375	0.02	0.0	3.66	0.300	0.00	0.0	4.16	0.100	0.02	30.0	−1.80	0.50
123	184	0.375	0.02	0.0	3.57	0.300	0.00	0.0	4.11	0.075	0.02	57.5	−3.03	0.55
124	185	0.375	0.02	0.0	3.70	0.300	0.00	0.0	4.12	0.050	0.02	60.0	−3.88	0.43
125	186	0.375	0.02	0.0	3.59	0.275	−0.02	0.0	3.99	0.000	0.00	0.0	−5.30	0.39
126	187	0.375	0.02	0.0	3.72	0.350	0.00	0.0	4.12	0.000	0.00	0.0	−5.94	0.40
127	188	0.375	0.02	0.0	3.66	0.350	0.02	0.0	4.00	0.025	0.00	57.5	−5.04	0.35
128	189	0.375	0.04	0.0	3.66	0.350	0.02	0.0	4.06	0.000	0.00	0.0	−3.96	0.40
129	190	0.375	0.04	0.0	3.46	0.350	0.02	0.0	3.93	0.025	0.00	57.5	−2.92	0.47
130	191	0.375	0.04	0.0	3.51	0.350	0.02	0.0	3.95	0.000	0.00	0.0	−1.66	0.44
131	192	0.375	0.04	0.0	3.29	0.350	0.02	0.0	3.79	0.100	−0.04	0.0	−0.86	0.50
132	193	0.375	0.06	0.0	3.37	0.350	0.02	0.0	3.82	0.100	−0.06	0.0	−0.07	0.44
133	194	0.375	0.06	0.0	3.10	0.350	0.04	0.0	3.66	0.125	−0.06	0.0	0.14	0.56
134	195	0.375	0.06	0.0	3.15	0.350	0.04	0.0	3.65	0.150	−0.08	0.0	0.38	0.50
135	196	0.375	0.00	60.0	3.55	0.375	0.02	50.0	3.89	0.375	0.06	0.0	2.93	0.34
		0.375	0.00	60.0	3.55	0.375	0.02	50.0	3.89	0.175	−0.08	0.0	−0.07	0.34
		0.375	0.06	0.0	2.93	0.350	0.04	0.0	3.43	0.175	−0.08	0.0	−0.07	0.51
136	197	0.375	0.00	60.0	3.67	0.375	0.04	50.0	4.05	0.375	0.06	0.0	3.08	0.38
		0.375	0.00	60.0	3.67	0.375	0.04	50.0	4.05	0.175	−0.08	0.0	−0.10	0.38
		0.375	0.06	0.0	3.08	0.350	0.04	0.0	3.46	0.175	−0.08	0.0	−0.10	0.38
137	198	0.400	0.02	60.0	3.47	0.400	0.04	52.5	3.81	0.375	0.06	0.0	3.02	0.34
		0.400	0.02	60.0	3.47	0.400	0.04	52.5	3.81	0.175	−0.08	0.0	−0.48	0.34
		0.375	0.06	0.0	3.02	0.350	0.04	0.0	3.26	0.175	−0.08	0.0	−0.48	0.24
138	199	0.400	0.02	60.0	3.56	0.400	0.06	52.5	3.88	0.200	−0.08	0.0	−0.53	0.32
139	200	0.400	0.04	60.0	3.28	0.400	0.06	52.5	3.59	0.200	−0.08	0.0	−0.92	0.31
140	201	0.400	0.04	60.0	3.33	0.400	0.06	52.5	3.63	0.225	−0.06	0.0	−0.87	0.30
141	202	0.400	0.06	60.0	3.06	0.400	0.06	52.5	3.37	0.225	−0.06	0.0	−1.38	0.31
142	203	0.425	0.06	60.0	3.04	0.400	0.06	50.0	3.53	0.225	−0.06	0.0	−1.38	0.50
143	204	0.425	0.06	60.0	2.90	0.400	0.06	50.0	3.33	0.225	−0.06	0.0	−1.77	0.44
144	205	0.425	0.08	60.0	3.06	0.425	0.06	50.0	3.51	0.225	−0.04	0.0	−1.67	0.45
$Z = 62$ (Sm)														
61	123	0.300	−0.04	60.0	3.79	0.300	−0.04	47.5	4.29	0.300	−0.02	0.0	−0.58	0.50
62	124	0.300	−0.04	60.0	4.00	0.300	−0.04	47.5	4.49	0.300	−0.02	0.0	−0.46	0.49
63	125	0.325	−0.04	60.0	4.39	0.300	−0.02	47.5	4.64	0.325	0.00	0.0	−0.24	0.26
118	180	0.375	0.00	0.0	3.77	0.350	0.02	0.0	3.99	0.150	0.06	0.0	0.06	0.22
119	181	0.375	0.00	0.0	3.60	0.350	0.00	0.0	3.84	0.175	0.02	55.0	−0.17	0.24
		0.375	0.00	0.0	3.60	0.350	0.00	0.0	3.84	0.150	0.06	15.0	−0.16	0.24
		0.175	0.02	55.0	−0.17	0.150	0.04	35.0	0.13	0.150	0.06	15.0	−0.16	0.29
120	182	0.375	0.00	0.0	3.72	0.325	0.02	0.0	4.07	0.175	0.02	60.0	−0.51	0.34
121	183	0.375	0.02	0.0	3.65	0.325	0.00	0.0	4.00	0.150	0.02	60.0	−1.17	0.35
122	184	0.375	0.02	0.0	3.77	0.300	0.02	0.0	4.18	0.100	0.02	30.0	−1.55	0.41
123	185	0.375	0.02	0.0	3.67	0.300	0.00	0.0	4.10	0.075	0.02	57.5	−2.80	0.43
124	186	0.375	0.02	0.0	3.81	0.300	0.00	0.0	4.11	0.050	0.02	60.0	−3.58	0.30

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 62$ (Sm)														
125	187	0.375	0.02	0.0	3.71	0.275	0.00	0.0	4.01	0.000	0.00	0.0	−4.98	0.30
126	188	0.375	0.02	0.0	3.85	0.350	0.02	0.0	4.14	0.000	0.00	0.0	−5.61	0.30
127	189	0.375	0.02	0.0	3.78	0.350	0.02	0.0	4.03	0.025	0.00	57.5	−4.65	0.25
128	190	0.375	0.02	0.0	3.86	0.350	0.02	0.0	4.09	0.000	0.00	0.0	−3.57	0.23
129	191	0.375	0.04	0.0	3.61	0.350	0.02	0.0	3.95	0.025	0.00	57.5	−2.51	0.34
130	192	0.375	0.04	0.0	3.66	0.350	0.02	0.0	3.98	0.000	0.00	0.0	−1.26	0.32
131	193	0.375	0.04	0.0	3.44	0.350	0.02	0.0	3.80	0.100	−0.04	0.0	−0.51	0.37
132	194	0.375	0.04	0.0	3.50	0.350	0.02	0.0	3.84	0.100	−0.06	0.0	0.26	0.34
133	195	0.375	0.06	0.0	3.26	0.350	0.04	0.0	3.66	0.125	−0.06	0.0	0.47	0.40
134	196	0.375	0.06	0.0	3.32	0.350	0.04	0.0	3.66	0.150	−0.08	0.0	0.78	0.35
135	197	0.375	0.00	60.0	3.98	0.325	0.00	52.5	4.24	0.375	0.06	0.0	3.09	0.26
		0.375	0.00	60.0	3.98	0.325	0.00	52.5	4.24	0.175	−0.08	0.0	0.36	0.26
		0.375	0.06	0.0	3.09	0.350	0.04	0.0	3.45	0.175	−0.08	0.0	0.36	0.35
136	198	0.375	0.00	60.0	4.11	0.375	0.04	50.0	4.39	0.375	0.06	0.0	3.25	0.28
		0.375	0.00	60.0	4.11	0.375	0.04	50.0	4.39	0.175	−0.08	0.0	0.32	0.28
		0.375	0.06	0.0	3.25	0.350	0.04	0.0	3.49	0.175	−0.08	0.0	0.32	0.24
137	199	0.375	0.00	60.0	3.98	0.375	0.04	52.5	4.20	0.175	−0.08	0.0	−0.08	0.22
138	200	0.400	0.04	60.0	4.11	0.375	0.04	52.5	4.34	0.200	−0.08	0.0	−0.09	0.23
140	202	0.400	0.06	60.0	3.84	0.400	0.06	52.5	4.06	0.225	−0.06	0.0	−0.52	0.22
141	203	0.400	0.06	60.0	3.54	0.400	0.06	52.5	3.80	0.225	−0.06	0.0	−1.02	0.26
142	204	0.425	0.08	60.0	3.60	0.400	0.06	50.0	3.95	0.225	−0.06	0.0	−1.03	0.36
143	205	0.425	0.08	60.0	3.43	0.400	0.06	50.0	3.76	0.225	−0.04	0.0	−1.46	0.32
144	206	0.425	0.08	60.0	3.56	0.400	0.06	50.0	3.93	0.225	−0.04	0.0	−1.42	0.37
145	207	0.425	0.08	57.5	3.44	0.425	0.08	50.0	3.78	0.225	−0.04	0.0	−1.75	0.34
146	208	0.425	0.08	57.5	3.69	0.425	0.06	50.0	3.97	0.250	−0.02	0.0	−1.62	0.28
$Z = 63$ (Eu)														
62	125	0.325	−0.04	60.0	4.09	0.325	−0.04	47.5	4.49	0.325	0.00	0.0	−0.48	0.40
118	181	0.375	0.00	0.0	3.63	0.350	0.02	5.0	3.93	0.150	0.06	0.0	0.11	0.30
119	182	0.375	0.00	0.0	3.47	0.350	0.00	0.0	3.78	0.150	0.06	12.5	−0.08	0.31
		0.375	0.00	0.0	3.47	0.350	0.00	0.0	3.78	0.175	0.02	55.0	−0.21	0.31
		0.150	0.06	12.5	−0.08	0.175	0.04	32.5	0.22	0.175	0.02	55.0	−0.21	0.30
120	183	0.375	0.00	0.0	3.59	0.350	0.00	0.0	3.91	0.175	0.02	60.0	−0.56	0.32
121	184	0.375	0.00	0.0	3.54	0.325	0.02	0.0	3.94	0.150	0.02	60.0	−1.16	0.40
122	185	0.375	0.02	0.0	3.70	0.325	0.02	0.0	4.03	0.100	0.02	30.0	−1.40	0.33
		0.375	0.02	0.0	3.70	0.325	0.02	0.0	4.03	0.125	0.02	60.0	−1.45	0.33
		0.100	0.02	30.0	−1.40	0.125	0.02	32.5	−1.06	0.125	0.02	60.0	−1.45	0.34
123	186	0.375	0.02	0.0	3.61	0.300	0.02	0.0	4.01	0.075	0.02	60.0	−2.61	0.39
124	187	0.375	0.02	0.0	3.75	0.350	0.00	0.0	4.05	0.050	0.02	60.0	−3.38	0.30
125	188	0.375	0.02	0.0	3.65	0.350	0.02	0.0	3.99	0.000	0.00	0.0	−4.74	0.34
126	189	0.375	0.02	0.0	3.79	0.350	0.02	0.0	4.08	0.000	0.00	0.0	−5.35	0.29
127	190	0.375	0.02	0.0	3.72	0.350	0.02	0.0	3.96	0.025	0.00	60.0	−4.38	0.25
128	191	0.375	0.04	0.0	3.81	0.350	0.02	0.0	4.02	0.000	0.00	0.0	−3.30	0.21
129	192	0.375	0.04	0.0	3.60	0.350	0.02	0.0	3.88	0.025	0.00	60.0	−2.23	0.27
130	193	0.375	0.04	0.0	3.64	0.350	0.02	0.0	3.89	0.000	0.00	0.0	−0.97	0.24
131	194	0.375	0.04	0.0	3.42	0.350	0.02	0.0	3.71	0.100	−0.04	0.0	−0.33	0.30
132	195	0.375	0.04	0.0	3.48	0.350	0.04	0.0	3.72	0.100	−0.06	0.0	0.40	0.24
133	196	0.375	0.06	0.0	3.23	0.350	0.04	0.0	3.51	0.125	−0.06	0.0	0.61	0.28
134	197	0.375	0.06	0.0	3.29	0.350	0.04	0.0	3.52	0.150	−0.06	0.0	0.88	0.23
135	198	0.375	0.06	0.0	3.06	0.350	0.04	0.0	3.30	0.175	−0.08	0.0	0.54	0.24
$Z = 64$ (Gd)														
80	144	0.425	0.02	0.0	4.45	0.375	0.02	0.0	4.70	0.150	0.02	60.0	−0.39	0.25

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 64$ (Gd)														
118	182	0.375	0.00	0.0	3.67	0.350	0.02	5.0	3.98	0.150	0.06	0.0	0.04	0.31
119	183	0.375	0.00	0.0	3.52	0.350	0.00	0.0	3.83	0.150	0.06	0.0	−0.12	0.31
		0.375	0.00	0.0	3.52	0.350	0.00	0.0	3.83	0.175	0.02	57.5	−0.31	0.31
		0.150	0.06	0.0	−0.12	0.175	0.04	32.5	0.21	0.175	0.02	57.5	−0.31	0.33
120	184	0.375	0.00	0.0	3.65	0.350	0.00	0.0	3.97	0.175	0.02	60.0	−0.68	0.31
121	185	0.375	0.00	0.0	3.60	0.325	0.02	0.0	4.03	0.150	0.02	60.0	−1.25	0.42
122	186	0.375	0.02	0.0	3.81	0.325	0.02	0.0	4.13	0.100	0.02	30.0	−1.33	0.32
		0.375	0.02	0.0	3.81	0.325	0.02	0.0	4.13	0.125	0.02	60.0	−1.46	0.32
		0.100	0.02	30.0	−1.33	0.125	0.02	32.5	−1.02	0.125	0.02	60.0	−1.46	0.31
123	187	0.375	0.02	0.0	3.72	0.325	0.02	0.0	4.07	0.075	0.02	60.0	−2.54	0.35
124	188	0.375	0.02	0.0	3.87	0.350	0.00	0.0	4.14	0.050	0.02	60.0	−3.22	0.28
125	189	0.375	0.02	0.0	3.77	0.300	0.02	0.0	4.07	0.000	0.00	0.0	−4.53	0.30
126	190	0.375	0.02	0.0	3.91	0.350	0.02	0.0	4.16	0.000	0.00	0.0	−5.13	0.26
127	191	0.375	0.02	0.0	3.83	0.350	0.02	0.0	4.05	0.025	0.00	60.0	−4.16	0.21
129	193	0.375	0.04	0.0	3.70	0.350	0.02	0.0	3.95	0.025	0.00	57.5	−1.99	0.25
130	194	0.375	0.04	0.0	3.75	0.350	0.02	0.0	3.97	0.000	0.00	0.0	−0.71	0.22
131	195	0.375	0.04	0.0	3.52	0.350	0.02	0.0	3.78	0.100	−0.04	0.0	−0.14	0.26
$Z = 65$ (Tb)														
118	183	0.375	0.00	0.0	3.64	0.350	0.04	12.5	4.03	0.200	0.04	50.0	0.32	0.39
		0.375	0.00	0.0	3.64	0.350	0.04	12.5	4.03	0.150	0.06	0.0	−0.05	0.39
		0.200	0.04	50.0	0.32	0.175	0.04	30.0	0.57	0.150	0.06	0.0	−0.05	0.25
119	184	0.375	0.00	5.0	3.52	0.350	0.02	5.0	3.86	0.150	0.06	7.5	−0.19	0.34
		0.375	0.00	5.0	3.52	0.350	0.02	5.0	3.86	0.200	0.04	60.0	−0.43	0.34
		0.150	0.06	7.5	−0.19	0.175	0.04	32.5	0.12	0.200	0.04	60.0	−0.43	0.32
120	185	0.375	0.00	5.0	3.66	0.350	0.02	0.0	3.99	0.175	0.02	60.0	−0.83	0.33
121	186	0.375	0.02	0.0	3.64	0.325	0.02	0.0	4.02	0.150	0.02	60.0	−1.36	0.38
122	187	0.375	0.02	0.0	3.78	0.350	0.00	0.0	4.02	0.100	0.02	30.0	−1.32	0.25
		0.375	0.02	0.0	3.78	0.350	0.00	0.0	4.02	0.125	0.02	60.0	−1.53	0.25
		0.100	0.02	30.0	−1.32	0.125	0.02	32.5	−1.05	0.125	0.02	60.0	−1.53	0.27
123	188	0.375	0.02	0.0	3.70	0.325	0.02	0.0	4.07	0.075	0.02	57.5	−2.53	0.37
124	189	0.375	0.02	0.0	3.84	0.350	0.02	0.0	4.11	0.050	0.02	60.0	−3.16	0.27
125	190	0.375	0.02	0.0	3.75	0.350	0.02	0.0	4.04	0.025	0.00	57.5	−4.32	0.29
126	191	0.375	0.02	0.0	3.88	0.350	0.02	0.0	4.12	0.000	0.00	0.0	−4.85	0.24
129	194	0.375	0.04	0.0	3.66	0.350	0.02	0.0	3.90	0.025	0.00	60.0	−1.79	0.24
130	195	0.375	0.04	0.0	3.70	0.350	0.02	0.0	3.91	0.075	−0.04	0.0	−0.51	0.20
131	196	0.375	0.04	0.0	3.48	0.350	0.02	0.0	3.72	0.100	−0.04	0.0	−0.10	0.24
$Z = 66$ (Dy)														
67	133	0.425	−0.06	0.0	3.04	0.400	−0.04	0.0	3.31	0.300	0.06	10.0	−0.84	0.27
80	146	0.425	0.02	0.0	4.50	0.375	0.04	0.0	4.76	0.150	0.02	60.0	−0.77	0.26
118	184	0.375	0.00	0.0	3.71	0.350	0.00	2.5	3.99	0.200	0.04	50.0	0.02	0.28
		0.375	0.00	0.0	3.71	0.350	0.00	2.5	3.99	0.150	0.06	0.0	−0.29	0.28
		0.200	0.04	50.0	0.02	0.175	0.04	30.0	0.41	0.150	0.06	0.0	−0.29	0.39
119	185	0.375	0.00	5.0	3.59	0.350	0.02	−2.5	3.93	0.150	0.06	0.0	−0.41	0.35
		0.375	0.00	5.0	3.59	0.350	0.02	−2.5	3.93	0.175	0.04	55.0	−0.71	0.35
		0.150	0.06	0.0	−0.41	0.150	0.04	32.5	−0.06	0.175	0.04	55.0	−0.71	0.34
120	186	0.375	0.00	5.0	3.76	0.350	0.02	2.5	4.07	0.175	0.02	60.0	−1.09	0.31
121	187	0.375	0.02	0.0	3.72	0.350	0.02	0.0	4.01	0.150	0.02	60.0	−1.58	0.29
122	188	0.375	0.02	0.0	3.87	0.350	0.02	0.0	4.15	0.100	0.02	30.0	−1.47	0.28
		0.375	0.02	0.0	3.87	0.350	0.02	0.0	4.15	0.125	0.02	60.0	−1.72	0.28
		0.100	0.02	30.0	−1.47	0.125	0.02	32.5	−1.20	0.125	0.02	60.0	−1.72	0.27

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 66$ (Dy)														
123	189	0.375	0.02	0.0	3.80	0.325	0.02	0.0	4.18	0.125	0.02	60.0	−2.46	0.38
124	190	0.375	0.02	0.0	3.95	0.325	0.02	0.0	4.25	0.075	0.02	60.0	−3.23	0.30
125	191	0.375	0.02	0.0	3.85	0.325	0.02	0.0	4.15	0.000	0.00	0.0	−4.42	0.30
126	192	0.375	0.02	0.0	3.99	0.350	0.02	0.0	4.23	0.000	0.00	0.0	−4.97	0.23
127	193	0.375	0.04	0.0	3.89	0.350	0.02	0.0	4.10	0.025	0.00	60.0	−3.99	0.21
128	194	0.375	0.04	0.0	3.93	0.350	0.02	0.0	4.15	0.000	0.00	0.0	−2.88	0.22
129	195	0.375	0.04	0.0	3.72	0.350	0.02	0.0	4.00	0.025	0.00	60.0	−1.79	0.27
130	196	0.375	0.04	0.0	3.77	0.350	0.02	0.0	4.00	0.000	0.00	0.0	−0.49	0.23
131	197	0.375	0.04	0.0	3.54	0.350	0.02	0.0	3.81	0.100	−0.04	0.0	−0.06	0.27
$Z = 67$ (Ho)														
117	184	0.200	0.04	42.5	−0.09	0.200	0.04	30.0	0.14	0.175	0.06	0.0	−0.63	0.23
118	185	0.200	0.04	50.0	−0.27	0.175	0.04	30.0	0.17	0.150	0.06	0.0	−0.57	0.44
119	186	0.375	0.00	7.5	3.59	0.350	0.02	7.5	3.81	0.150	0.06	0.0	−0.67	0.22
		0.375	0.00	7.5	3.59	0.350	0.02	7.5	3.81	0.200	0.04	55.0	−1.03	0.22
		0.150	0.06	0.0	−0.67	0.175	0.04	32.5	−0.23	0.200	0.04	55.0	−1.03	0.44
120	187	0.375	0.02	7.5	3.73	0.350	0.02	7.5	3.98	0.175	0.02	60.0	−1.36	0.25
121	188	0.375	0.02	7.5	3.69	0.325	0.04	0.0	4.06	0.150	0.02	60.0	−1.80	0.37
122	189	0.375	0.02	5.0	3.85	0.350	0.02	0.0	4.09	0.100	0.02	30.0	−1.60	0.23
		0.375	0.02	5.0	3.85	0.350	0.02	0.0	4.09	0.125	0.02	60.0	−1.90	0.23
		0.100	0.02	30.0	−1.60	0.125	0.02	32.5	−1.36	0.125	0.02	60.0	−1.90	0.24
123	190	0.375	0.02	0.0	3.82	0.325	0.04	0.0	4.20	0.125	0.02	60.0	−2.63	0.38
124	191	0.375	0.02	0.0	3.97	0.325	0.02	0.0	4.21	0.075	0.02	60.0	−3.34	0.24
125	192	0.375	0.02	0.0	3.88	0.325	0.02	0.0	4.11	0.000	0.00	0.0	−4.41	0.23
127	194	0.375	0.04	0.0	3.83	0.350	0.02	0.0	4.05	0.025	0.00	55.0	−4.00	0.22
128	195	0.375	0.04	0.0	3.87	0.350	0.02	0.0	4.09	0.000	0.00	0.0	−2.84	0.22
129	196	0.375	0.04	0.0	3.67	0.350	0.02	0.0	3.94	0.025	0.00	57.5	−1.80	0.27
131	198	0.375	0.04	0.0	3.48	0.350	0.02	12.5	3.72	0.100	−0.04	0.0	−0.16	0.23
$Z = 68$ (Er)														
117	185	0.200	0.04	45.0	−0.41	0.175	0.04	30.0	−0.17	0.175	0.08	0.0	−0.96	0.25
118	186	0.200	0.04	55.0	−0.64	0.150	0.04	30.0	−0.17	0.150	0.06	0.0	−0.95	0.47
119	187	0.375	0.02	7.5	3.58	0.325	0.04	10.0	3.86	0.150	0.06	0.0	−1.01	0.28
		0.375	0.02	7.5	3.58	0.325	0.04	10.0	3.86	0.200	0.04	57.5	−1.40	0.28
		0.150	0.06	0.0	−1.01	0.150	0.04	32.5	−0.61	0.200	0.04	57.5	−1.40	0.40
120	188	0.375	0.02	7.5	3.73	0.325	0.04	0.0	4.08	0.175	0.04	60.0	−1.71	0.35
121	189	0.375	0.02	7.5	3.69	0.325	0.04	0.0	4.17	0.150	0.02	60.0	−2.15	0.48
122	190	0.375	0.02	7.5	3.87	0.325	0.04	0.0	4.30	0.125	0.02	60.0	−2.24	0.43
123	191	0.375	0.02	7.5	3.87	0.325	0.02	0.0	4.26	0.100	0.02	57.5	−3.17	0.40
124	192	0.375	0.02	0.0	4.04	0.325	0.02	0.0	4.34	0.075	0.02	60.0	−3.64	0.30
125	193	0.375	0.02	0.0	3.94	0.325	0.02	0.0	4.23	0.000	0.00	0.0	−4.79	0.29
126	194	0.375	0.04	0.0	4.03	0.325	0.02	0.0	4.27	0.000	0.00	0.0	−5.21	0.24
127	195	0.375	0.04	0.0	3.84	0.300	0.02	5.0	4.18	0.025	0.00	60.0	−4.22	0.34
128	196	0.375	0.04	0.0	3.89	0.350	0.02	0.0	4.16	0.000	0.00	0.0	−3.09	0.27
129	197	0.375	0.04	0.0	3.68	0.350	0.02	0.0	4.01	0.025	0.00	60.0	−2.00	0.33
131	199	0.375	0.06	0.0	3.47	0.350	0.04	0.0	3.71	0.100	−0.04	2.5	−0.24	0.24
$Z = 69$ (Tm)														
117	186	0.200	0.04	45.0	−0.76	0.200	0.04	32.5	−0.45	0.175	0.08	0.0	−1.41	0.31
118	187	0.200	0.04	57.5	−0.99	0.150	0.04	30.0	−0.52	0.150	0.06	0.0	−1.37	0.47
119	188	0.375	0.02	10.0	3.50	0.325	0.04	5.0	3.81	0.150	0.06	0.0	−1.45	0.30
		0.375	0.02	10.0	3.50	0.325	0.04	5.0	3.81	0.200	0.04	57.5	−1.72	0.30

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 69$ (Tm)														
119	188	0.150	0.06	0.0	−1.45	0.150	0.04	32.5	−0.95	0.200	0.04	57.5	−1.72	0.50
120	189	0.375	0.02	10.0	3.65	0.325	0.04	0.0	4.02	0.175	0.04	60.0	−2.05	0.36
121	190	0.375	0.02	10.0	3.63	0.325	0.04	0.0	4.10	0.150	0.02	60.0	−2.47	0.47
122	191	0.375	0.02	10.0	3.84	0.325	0.04	0.0	4.24	0.100	0.02	60.0	−2.40	0.40
123	192	0.375	0.02	10.0	3.82	0.325	0.02	0.0	4.26	0.100	0.02	57.5	−3.46	0.44
124	193	0.375	0.02	10.0	4.03	0.325	0.02	0.0	4.32	0.075	0.02	60.0	−3.88	0.30
125	194	0.375	0.04	0.0	3.95	0.325	0.04	0.0	4.27	0.000	0.00	0.0	−4.97	0.32
126	195	0.375	0.04	0.0	4.00	0.325	0.02	0.0	4.25	0.000	0.00	0.0	−5.47	0.25
127	196	0.375	0.04	0.0	3.81	0.300	0.02	0.0	4.16	0.025	0.00	60.0	−4.40	0.35
128	197	0.375	0.04	0.0	3.86	0.350	0.04	0.0	4.12	0.000	0.00	0.0	−3.27	0.26
129	198	0.375	0.04	0.0	3.65	0.350	0.04	0.0	3.92	0.025	0.00	57.5	−2.17	0.27
131	200	0.375	0.06	0.0	3.40	0.375	0.04	15.0	3.73	0.100	−0.04	0.0	−0.44	0.33
132	201	0.375	0.06	0.0	3.41	0.375	0.04	12.5	3.67	0.100	−0.04	0.0	0.29	0.25
$Z = 70$ (Yb)														
117	187	0.200	0.04	45.0	−1.11	0.175	0.04	30.0	−0.86	0.175	0.08	0.0	−1.76	0.25
118	188	0.200	0.04	60.0	−1.41	0.175	0.04	32.5	−0.82	0.150	0.06	0.0	−1.80	0.59
119	189	0.375	0.02	10.0	3.52	0.350	0.04	7.5	3.89	0.150	0.06	0.0	−1.86	0.38
		0.375	0.02	10.0	3.52	0.350	0.04	7.5	3.89	0.200	0.04	57.5	−2.10	0.38
		0.150	0.06	0.0	−1.86	0.150	0.04	32.5	−1.39	0.200	0.04	57.5	−2.10	0.47
120	190	0.375	0.02	10.0	3.68	0.350	0.04	5.0	4.10	0.175	0.04	60.0	−2.48	0.42
121	191	0.375	0.02	7.5	3.65	0.325	0.04	0.0	4.23	0.150	0.02	60.0	−2.90	0.58
122	192	0.375	0.02	10.0	3.85	0.325	0.02	0.0	4.41	0.100	0.02	60.0	−2.91	0.56
123	193	0.375	0.02	10.0	3.85	0.325	0.04	0.0	4.37	0.100	0.02	57.5	−3.95	0.52
124	194	0.375	0.02	10.0	4.07	0.325	0.04	0.0	4.45	0.075	0.02	60.0	−4.37	0.38
125	195	0.375	0.04	0.0	3.93	0.300	0.04	0.0	4.44	0.000	0.00	0.0	−5.48	0.51
126	196	0.375	0.04	0.0	4.00	0.300	0.02	0.0	4.52	0.000	0.00	0.0	−5.95	0.52
127	197	0.375	0.04	0.0	3.81	0.300	0.02	0.0	4.39	0.025	0.00	57.5	−4.88	0.58
128	198	0.375	0.04	0.0	3.87	0.300	0.02	0.0	4.35	0.000	0.00	0.0	−3.72	0.47
129	199	0.375	0.06	0.0	3.63	0.275	0.04	0.0	4.22	0.025	0.00	57.5	−2.59	0.59
130	200	0.375	0.06	0.0	3.61	0.300	0.02	12.5	4.17	0.050	−0.02	0.0	−1.27	0.56
131	201	0.375	0.06	0.0	3.34	0.300	0.02	15.0	3.95	0.100	−0.04	0.0	−0.63	0.61
132	202	0.375	0.06	0.0	3.36	0.300	0.02	17.5	3.86	0.100	−0.04	0.0	0.12	0.50
133	203	0.375	0.06	0.0	3.09	0.300	0.02	17.5	3.54	0.100	−0.04	5.0	0.52	0.45
134	204	0.325	0.02	15.0	3.14	0.375	0.06	10.0	3.47	0.375	0.06	0.0	3.18	0.29
		0.325	0.02	15.0	3.14	0.300	0.02	17.5	3.40	0.125	−0.04	0.0	1.08	0.26
		0.375	0.06	0.0	3.18	0.300	0.02	17.5	3.40	0.125	−0.04	0.0	1.08	0.21
135	205	0.375	0.06	0.0	2.97	0.375	0.06	10.0	3.25	0.325	0.02	15.0	2.82	0.28
		0.375	0.06	0.0	2.97	0.375	0.06	10.0	3.25	0.150	−0.04	0.0	1.20	0.28
		0.325	0.02	15.0	2.82	0.300	0.02	17.5	3.08	0.150	−0.04	0.0	1.20	0.26
$Z = 71$ (Lu)														
117	188	0.200	0.04	47.5	−1.52	0.175	0.04	30.0	−1.31	0.175	0.08	0.0	−2.30	0.20
118	189	0.375	0.02	10.0	3.67	0.350	0.04	5.0	3.91	0.200	0.04	55.0	−1.82	0.24
		0.375	0.02	10.0	3.67	0.350	0.04	5.0	3.91	0.150	0.06	0.0	−2.32	0.24
		0.200	0.04	55.0	−1.82	0.175	0.04	32.5	−1.26	0.150	0.06	0.0	−2.32	0.56
119	190	0.375	0.02	10.0	3.49	0.350	0.02	2.5	3.90	0.150	0.06	0.0	−2.38	0.41
		0.375	0.02	10.0	3.49	0.350	0.02	2.5	3.90	0.200	0.04	57.5	−2.47	0.41
		0.150	0.06	0.0	−2.38	0.150	0.04	32.5	−1.85	0.200	0.04	57.5	−2.47	0.54
120	191	0.375	0.02	10.0	3.66	0.325	0.04	0.0	4.16	0.175	0.04	60.0	−2.89	0.50
121	192	0.375	0.02	10.0	3.64	0.325	0.04	0.0	4.25	0.150	0.02	60.0	−3.30	0.61
122	193	0.375	0.02	10.0	3.84	0.325	0.04	0.0	4.38	0.100	0.02	60.0	−3.35	0.54

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 71$ (Lu)														
123	194	0.400	0.02	12.5	3.82	0.325	0.04	0.0	4.39	0.100	0.02	57.5	−4.35	0.57
124	195	0.375	0.02	10.0	4.07	0.300	0.06	0.0	4.48	0.075	0.02	60.0	−4.78	0.42
125	196	0.375	0.04	0.0	4.00	0.300	0.04	0.0	4.52	0.000	0.00	0.0	−5.74	0.52
126	197	0.375	0.04	0.0	4.06	0.300	0.02	0.0	4.58	0.000	0.00	0.0	−6.18	0.51
127	198	0.375	0.04	0.0	3.89	0.275	0.04	0.0	4.37	0.025	0.00	60.0	−5.26	0.48
128	199	0.375	0.06	0.0	3.90	0.275	0.02	0.0	4.43	0.000	0.00	0.0	−4.13	0.53
129	200	0.375	0.06	0.0	3.62	0.275	0.02	0.0	4.30	0.025	0.00	30.0	−2.96	0.67
130	201	0.375	0.06	0.0	3.60	0.275	0.02	0.0	4.28	0.050	0.00	27.5	−1.61	0.67
131	202	0.375	0.06	0.0	3.34	0.325	0.02	22.5	4.17	0.100	−0.04	2.5	−0.95	0.84
132	203	0.375	0.06	0.0	3.36	0.325	0.02	22.5	4.08	0.100	−0.04	0.0	−0.20	0.72
133	204	0.375	0.06	0.0	3.10	0.325	0.02	22.5	3.79	0.100	−0.04	5.0	0.20	0.69
134	205	0.375	0.06	0.0	3.19	0.300	0.02	15.0	3.60	0.125	−0.04	0.0	0.80	0.41
135	206	0.325	0.04	0.0	2.94	0.300	0.00	22.5	3.29	0.150	−0.04	0.0	0.98	0.36
136	207	0.325	0.04	0.0	2.95	0.300	0.02	12.5	3.15	0.150	−0.04	0.0	1.23	0.20
$Z = 72$ (Hf)														
86	158	0.375	0.02	15.0	3.86	0.300	0.04	10.0	4.07	0.125	−0.02	0.0	−0.92	0.21
87	159	0.375	0.02	15.0	3.71	0.300	0.02	7.5	4.02	0.125	−0.02	0.0	−0.44	0.30
89	161	0.400	0.04	17.5	3.62	0.325	0.02	7.5	3.84	0.175	0.00	0.0	0.43	0.22
118	190	0.400	0.00	10.0	3.65	0.350	0.04	0.0	4.07	0.200	0.04	55.0	−2.17	0.41
		0.400	0.00	10.0	3.65	0.350	0.04	0.0	4.07	0.150	0.06	0.0	−2.81	0.41
		0.200	0.04	55.0	−2.17	0.150	0.04	32.5	−1.73	0.150	0.06	0.0	−2.81	0.43
119	191	0.400	0.00	10.0	3.47	0.325	0.04	0.0	4.20	0.175	0.04	55.0	−2.93	0.73
		0.400	0.00	10.0	3.47	0.325	0.04	0.0	4.20	0.125	0.06	0.0	−2.85	0.73
		0.175	0.04	55.0	−2.93	0.150	0.04	32.5	−2.32	0.125	0.06	0.0	−2.85	0.53
120	192	0.400	0.02	10.0	3.64	0.325	0.04	0.0	4.41	0.150	0.02	60.0	−3.24	0.76
121	193	0.400	0.02	10.0	3.54	0.325	0.04	0.0	4.49	0.150	0.02	60.0	−3.77	0.95
122	194	0.400	0.02	10.0	3.80	0.300	0.06	0.0	4.58	0.100	0.02	60.0	−3.97	0.78
123	195	0.400	0.02	12.5	3.75	0.300	0.06	0.0	4.72	0.100	0.02	57.5	−4.91	0.97
124	196	0.400	0.02	12.5	4.02	0.300	0.04	0.0	4.86	0.050	0.02	60.0	−5.38	0.84
125	197	0.375	0.04	0.0	3.99	0.300	0.04	0.0	4.84	0.000	0.00	0.0	−6.40	0.86
126	198	0.375	0.04	0.0	4.05	0.300	0.02	0.0	4.88	0.000	0.00	0.0	−6.83	0.82
127	199	0.375	0.04	0.0	3.87	0.275	0.02	0.0	4.75	0.025	0.00	60.0	−5.89	0.88
128	200	0.375	0.06	0.0	3.90	0.275	0.02	0.0	4.75	0.000	0.00	0.0	−4.79	0.85
129	201	0.375	0.06	0.0	3.62	0.250	0.02	0.0	4.62	0.025	0.00	55.0	−3.61	1.00
130	202	0.375	0.06	0.0	3.60	0.325	0.02	30.0	4.62	0.000	0.00	0.0	−2.27	1.03
131	203	0.375	0.06	0.0	3.37	0.375	0.02	30.0	4.45	0.075	−0.02	2.5	−1.38	1.08
132	204	0.375	0.06	0.0	3.40	0.325	0.02	22.5	4.38	0.100	−0.02	0.0	−0.47	0.98
133	205	0.375	0.06	0.0	3.14	0.300	0.00	25.0	4.11	0.100	−0.04	5.0	−0.07	0.97
134	206	0.375	0.06	0.0	3.24	0.325	0.02	22.5	3.98	0.125	−0.04	0.0	0.67	0.74
135	207	0.375	0.06	0.0	3.04	0.300	0.00	22.5	3.61	0.125	−0.04	0.0	0.82	0.58
136	208	0.375	0.08	0.0	3.13	0.300	0.00	22.5	3.44	0.150	−0.04	0.0	1.23	0.30
137	209	0.325	0.04	0.0	2.94	0.325	0.02	12.5	3.16	0.150	−0.04	0.0	1.13	0.22
$Z = 73$ (Ta)														
83	156	0.425	0.02	0.0	3.60	0.350	0.04	0.0	4.30	0.075	0.00	25.0	−4.20	0.71
84	157	0.400	0.02	0.0	4.01	0.325	0.04	0.0	4.31	0.075	0.00	10.0	−3.29	0.31
85	158	0.400	0.02	12.5	3.88	0.325	0.04	0.0	4.30	0.100	0.00	0.0	−2.39	0.43
86	159	0.400	0.02	15.0	3.78	0.325	0.02	5.0	4.27	0.125	−0.02	2.5	−1.53	0.48
87	160	0.400	0.02	15.0	3.59	0.300	0.02	5.0	4.28	0.125	−0.02	0.0	−1.05	0.69
88	161	0.400	0.02	17.5	3.60	0.325	0.02	5.0	4.15	0.150	0.00	0.0	−0.52	0.55
89	162	0.400	0.02	17.5	3.48	0.325	0.00	2.5	4.09	0.150	0.00	0.0	−0.12	0.61

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 73$ (Ta)														
90	163	0.425	0.04	20.0	3.55	0.325	0.00	7.5	3.99	0.175	0.00	0.0	0.21	0.44
91	164	0.400	0.02	20.0	3.53	0.325	0.00	10.0	3.83	0.175	0.02	0.0	0.42	0.30
113	186	0.400	−0.02	0.0	3.99	0.375	0.00	12.5	4.25	0.200	0.10	0.0	−2.65	0.26
115	188	0.400	0.00	0.0	3.77	0.375	0.02	12.5	3.97	0.175	0.08	0.0	−2.75	0.20
116	189	0.400	0.00	0.0	3.75	0.350	0.04	5.0	4.01	0.175	0.08	0.0	−2.79	0.26
117	190	0.400	0.00	7.5	3.49	0.350	0.06	0.0	4.10	0.150	0.06	0.0	−3.27	0.62
118	191	0.400	0.00	10.0	3.44	0.325	0.06	0.0	4.24	0.175	0.04	60.0	−2.67	0.81
		0.400	0.00	10.0	3.44	0.325	0.06	0.0	4.24	0.150	0.06	0.0	−3.50	0.81
		0.175	0.04	60.0	−2.67	0.150	0.04	35.0	−2.34	0.150	0.06	0.0	−3.50	0.33
119	192	0.400	0.00	10.0	3.25	0.325	0.06	0.0	4.43	0.175	0.04	55.0	−3.39	1.19
		0.400	0.00	10.0	3.25	0.325	0.06	0.0	4.43	0.125	0.06	0.0	−3.60	1.19
		0.175	0.04	55.0	−3.39	0.150	0.04	32.5	−2.92	0.125	0.06	0.0	−3.60	0.48
120	193	0.400	0.02	10.0	3.46	0.325	0.06	0.0	4.66	0.125	0.06	0.0	−3.38	1.20
		0.400	0.02	10.0	3.46	0.325	0.06	0.0	4.66	0.150	0.02	60.0	−3.76	1.20
		0.125	0.06	0.0	−3.38	0.125	0.04	37.5	−3.15	0.150	0.02	60.0	−3.76	0.23
121	194	0.400	0.02	10.0	3.37	0.325	0.04	0.0	4.77	0.100	0.04	22.5	−4.07	1.40
		0.400	0.02	10.0	3.37	0.325	0.04	0.0	4.77	0.125	0.02	60.0	−4.24	1.40
		0.100	0.04	22.5	−4.07	0.100	0.02	37.5	−3.86	0.125	0.02	60.0	−4.24	0.21
122	195	0.400	0.02	10.0	3.63	0.325	0.04	0.0	4.91	0.100	0.02	60.0	−4.55	1.27
123	196	0.400	0.02	12.5	3.58	0.300	0.06	0.0	4.98	0.075	0.02	52.5	−5.45	1.40
124	197	0.400	0.02	12.5	3.84	0.300	0.04	0.0	5.10	0.075	0.02	60.0	−5.97	1.26
125	198	0.425	0.04	15.0	3.82	0.300	0.04	0.0	5.09	0.025	0.00	57.5	−6.87	1.27
126	199	0.375	0.04	0.0	4.07	0.300	0.04	0.0	5.13	0.000	0.00	0.0	−7.27	1.05
127	200	0.375	0.04	0.0	3.89	0.300	0.02	0.0	5.00	0.025	0.00	60.0	−6.37	1.11
128	201	0.375	0.06	0.0	3.93	0.300	0.02	0.0	4.96	0.000	0.00	0.0	−5.22	1.03
129	202	0.375	0.06	0.0	3.65	0.375	0.02	30.0	4.65	0.025	0.00	60.0	−4.09	1.00
130	203	0.375	0.06	0.0	3.62	0.375	0.02	30.0	4.62	0.025	0.00	0.0	−2.78	1.00
131	204	0.375	0.06	0.0	3.35	0.350	0.02	32.5	4.41	0.075	−0.02	0.0	−1.90	1.05
132	205	0.375	0.06	0.0	3.39	0.375	0.02	30.0	4.44	0.075	−0.02	0.0	−0.94	1.05
133	206	0.375	0.06	0.0	3.13	0.375	0.02	30.0	4.31	0.100	−0.02	0.0	−0.51	1.18
134	207	0.375	0.08	0.0	3.19	0.300	0.02	12.5	4.05	0.100	−0.02	0.0	0.17	0.85
135	208	0.375	0.08	0.0	2.94	0.300	0.00	20.0	3.87	0.125	−0.04	0.0	0.44	0.93
136	209	0.375	0.08	0.0	3.12	0.325	0.02	12.5	3.64	0.150	−0.02	0.0	0.97	0.52
137	210	0.375	0.08	0.0	3.06	0.300	0.02	12.5	3.40	0.150	−0.04	0.0	0.85	0.35
$Z = 74$ (W)														
84	158	0.425	0.04	0.0	3.69	0.325	0.04	0.0	4.60	0.075	0.00	10.0	−3.96	0.92
85	159	0.425	0.02	12.5	3.82	0.325	0.02	5.0	4.58	0.100	0.00	0.0	−2.95	0.77
86	160	0.400	0.02	15.0	3.84	0.300	0.02	10.0	4.66	0.125	0.00	0.0	−2.00	0.82
87	161	0.400	0.02	15.0	3.63	0.300	0.02	10.0	4.59	0.125	0.00	0.0	−1.45	0.96
88	162	0.425	0.02	17.5	3.69	0.300	0.02	5.0	4.52	0.150	0.00	0.0	−0.89	0.83
89	163	0.425	0.04	20.0	3.52	0.325	0.00	0.0	4.36	0.150	0.00	0.0	−0.48	0.85
90	164	0.425	0.04	20.0	3.54	0.350	0.02	7.5	4.28	0.150	0.00	0.0	−0.05	0.74
91	165	0.425	0.04	20.0	3.57	0.325	0.00	7.5	4.16	0.175	0.02	0.0	0.23	0.59
113	187	0.400	−0.02	0.0	3.91	0.375	0.00	0.0	4.18	0.200	0.08	0.0	−2.54	0.27
114	188	0.400	0.00	0.0	3.91	0.350	0.02	−2.5	4.16	0.175	0.08	0.0	−2.53	0.25
115	189	0.400	0.00	0.0	3.62	0.375	0.02	0.0	4.05	0.175	0.08	0.0	−2.95	0.43
116	190	0.400	0.00	0.0	3.60	0.350	0.04	0.0	4.12	0.150	0.06	0.0	−3.14	0.52
117	191	0.400	0.00	5.0	3.34	0.325	0.06	0.0	4.19	0.150	0.06	0.0	−3.69	0.85
118	192	0.400	0.00	10.0	3.33	0.325	0.06	0.0	4.52	0.175	0.04	60.0	−3.07	1.19
		0.400	0.00	10.0	3.33	0.325	0.06	0.0	4.52	0.150	0.06	0.0	−3.92	1.19

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 74$ (W)														
118	192	0.175	0.04	60.0	−3.07	0.150	0.04	35.0	−2.84	0.150	0.06	0.0	−3.92	0.23
119	193	0.400	0.00	10.0	3.13	0.325	0.06	0.0	4.68	0.175	0.04	55.0	−3.76	1.54
		0.400	0.00	10.0	3.13	0.325	0.06	0.0	4.68	0.125	0.06	0.0	−4.19	1.54
		0.175	0.04	55.0	−3.76	0.125	0.04	35.0	−3.38	0.125	0.06	0.0	−4.19	0.38
120	194	0.400	0.00	10.0	3.35	0.325	0.04	0.0	4.91	0.100	0.04	0.0	−4.04	1.56
		0.400	0.00	10.0	3.35	0.325	0.04	0.0	4.91	0.150	0.02	60.0	−4.24	1.56
		0.100	0.04	0.0	−4.04	0.125	0.04	35.0	−3.74	0.150	0.02	60.0	−4.24	0.30
121	195	0.400	0.02	10.0	3.27	0.300	0.06	0.0	5.01	0.100	0.04	22.5	−4.73	1.73
		0.400	0.02	10.0	3.27	0.300	0.06	0.0	5.01	0.125	0.02	60.0	−4.81	1.73
		0.100	0.04	22.5	−4.73	0.100	0.02	37.5	−4.51	0.125	0.02	60.0	−4.81	0.22
122	196	0.425	0.02	12.5	3.49	0.300	0.06	0.0	5.24	0.100	0.02	60.0	−5.21	1.74
123	197	0.425	0.02	12.5	3.43	0.300	0.04	0.0	5.31	0.075	0.02	52.5	−6.14	1.88
124	198	0.425	0.04	12.5	3.74	0.300	0.04	0.0	5.41	0.050	0.02	60.0	−6.69	1.67
125	199	0.425	0.04	12.5	3.65	0.300	0.04	0.0	5.39	0.000	0.00	0.0	−7.72	1.74
126	200	0.425	0.04	12.5	3.94	0.300	0.02	0.0	5.37	0.000	0.00	0.0	−8.12	1.43
127	201	0.375	0.04	0.0	3.90	0.350	0.02	27.5	5.16	0.025	0.00	60.0	−7.14	1.26
128	202	0.375	0.06	0.0	3.94	0.375	0.02	27.5	5.02	0.000	0.00	0.0	−6.06	1.07
129	203	0.375	0.06	0.0	3.66	0.375	0.02	30.0	4.71	0.025	0.00	60.0	−4.86	1.05
130	204	0.375	0.06	0.0	3.63	0.375	0.02	30.0	4.69	0.000	0.00	0.0	−3.58	1.06
131	205	0.375	0.06	0.0	3.36	0.350	0.02	32.5	4.47	0.050	0.00	0.0	−2.49	1.10
132	206	0.375	0.06	0.0	3.40	0.375	0.02	30.0	4.51	0.075	−0.02	0.0	−1.46	1.11
133	207	0.375	0.06	0.0	3.14	0.375	0.02	30.0	4.36	0.100	−0.02	2.5	−0.89	1.22
134	208	0.375	0.08	0.0	3.21	0.275	0.00	15.0	4.38	0.100	−0.02	0.0	−0.20	1.17
135	209	0.375	0.08	0.0	2.95	0.325	0.02	17.5	3.99	0.125	−0.02	0.0	0.26	1.04
136	210	0.375	0.08	0.0	3.15	0.325	0.02	12.5	3.93	0.125	−0.02	0.0	0.72	0.78
137	211	0.375	0.08	0.0	3.08	0.325	0.04	12.5	3.71	0.150	−0.02	0.0	0.85	0.63
138	212	0.350	0.06	0.0	3.35	0.300	0.02	12.5	3.70	0.150	−0.02	0.0	1.08	0.35
139	213	0.350	0.06	0.0	3.26	0.300	0.02	10.0	3.47	0.150	−0.04	0.0	0.94	0.21
$Z = 75$ (Re)														
85	160	0.425	0.02	12.5	3.39	0.375	0.02	30.0	4.72	0.100	0.00	0.0	−3.84	1.33
86	161	0.425	0.02	15.0	3.51	0.375	0.02	30.0	4.76	0.125	0.00	0.0	−2.80	1.25
87	162	0.425	0.02	15.0	3.38	0.375	0.02	27.5	4.69	0.125	0.00	0.0	−2.25	1.31
88	163	0.425	0.02	17.5	3.37	0.375	0.02	27.5	4.65	0.125	0.00	0.0	−1.58	1.28
89	164	0.425	0.02	17.5	3.24	0.375	0.02	27.5	4.53	0.150	0.00	0.0	−1.11	1.29
106	181	0.225	0.00	57.5	0.99	0.225	0.02	42.5	1.20	0.200	0.06	0.0	−1.95	0.21
107	182	0.225	0.00	57.5	0.69	0.225	0.02	42.5	0.95	0.200	0.06	0.0	−2.40	0.26
108	183	0.225	0.00	57.5	0.54	0.200	0.02	42.5	0.76	0.200	0.06	0.0	−2.48	0.22
111	186	0.400	−0.02	2.5	3.95	0.375	0.00	0.0	4.16	0.200	0.08	0.0	−2.82	0.21
112	187	0.425	0.00	0.0	3.94	0.375	0.00	0.0	4.19	0.200	0.08	0.0	−2.58	0.24
113	188	0.425	0.00	0.0	3.65	0.350	0.02	0.0	4.08	0.175	0.08	0.0	−2.99	0.43
114	189	0.425	0.00	2.5	3.69	0.375	0.02	0.0	4.12	0.175	0.08	0.0	−3.01	0.43
115	190	0.425	0.00	2.5	3.47	0.350	0.04	0.0	4.00	0.175	0.08	0.0	−3.41	0.53
116	191	0.400	0.00	2.5	3.35	0.325	0.06	0.0	4.21	0.150	0.06	0.0	−3.79	0.86
117	192	0.400	0.00	2.5	3.10	0.325	0.06	0.0	4.40	0.150	0.06	0.0	−4.34	1.30
118	193	0.400	0.00	7.5	3.09	0.325	0.06	0.0	4.72	0.125	0.06	0.0	−4.53	1.63
119	194	0.400	0.00	7.5	2.91	0.325	0.06	0.0	4.88	0.150	0.02	57.5	−4.32	1.97
		0.400	0.00	7.5	2.91	0.325	0.06	0.0	4.88	0.125	0.06	0.0	−4.91	1.97
		0.150	0.02	57.5	−4.32	0.150	0.04	37.5	−4.09	0.125	0.06	0.0	−4.91	0.22
120	195	0.425	0.02	12.5	3.01	0.300	0.06	0.0	5.11	0.100	0.04	0.0	−4.72	2.09
		0.425	0.02	12.5	3.01	0.300	0.06	0.0	5.11	0.150	0.02	60.0	−4.86	2.09

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 75$ (Re)														
120	195	0.100	0.04	0.0	−4.72	0.125	0.04	35.0	−4.41	0.150	0.02	60.0	−4.86	0.30
121	196	0.425	0.02	12.5	2.90	0.300	0.06	0.0	5.25	0.125	0.02	57.5	−5.48	2.35
122	197	0.425	0.02	12.5	3.15	0.300	0.06	0.0	5.47	0.100	0.02	60.0	−5.94	2.31
123	198	0.425	0.02	12.5	3.11	0.300	0.04	0.0	5.53	0.075	0.02	50.0	−6.88	2.42
124	199	0.425	0.04	12.5	3.45	0.300	0.04	0.0	5.63	0.050	0.02	60.0	−7.39	2.18
125	200	0.425	0.04	12.5	3.37	0.375	0.00	25.0	5.55	0.025	0.00	32.5	−8.26	2.18
126	201	0.425	0.04	12.5	3.65	0.375	0.02	25.0	5.43	0.000	0.00	0.0	−8.58	1.79
127	202	0.425	0.04	12.5	3.71	0.375	0.02	27.5	5.15	0.025	0.00	30.0	−7.71	1.44
128	203	0.400	0.06	0.0	3.84	0.375	0.00	27.5	4.97	0.025	0.00	0.0	−6.56	1.13
129	204	0.400	0.06	0.0	3.58	0.375	0.02	27.5	4.60	0.025	0.00	17.5	−5.43	1.02
130	205	0.375	0.06	0.0	3.61	0.350	0.02	32.5	4.56	0.025	0.00	0.0	−4.15	0.95
131	206	0.375	0.06	0.0	3.35	0.350	0.00	32.5	4.39	0.050	0.00	0.0	−3.21	1.05
132	207	0.400	0.08	0.0	3.36	0.400	0.04	17.5	4.58	0.075	−0.02	0.0	−2.12	1.22
133	208	0.400	0.08	0.0	3.08	0.375	0.02	17.5	4.37	0.075	−0.02	2.5	−1.45	1.29
134	209	0.375	0.08	0.0	3.19	0.375	0.04	17.5	4.41	0.100	−0.02	2.5	−0.78	1.22
135	210	0.375	0.08	0.0	2.95	0.325	0.02	17.5	4.14	0.100	−0.04	0.0	−0.35	1.19
136	211	0.375	0.08	0.0	3.14	0.300	0.02	10.0	4.14	0.100	−0.02	2.5	0.29	1.01
137	212	0.375	0.08	0.0	3.08	0.300	0.02	12.5	3.86	0.125	−0.02	0.0	0.43	0.78
138	213	0.375	0.08	0.0	3.36	0.325	0.04	10.0	3.85	0.150	−0.02	0.0	0.72	0.49
139	214	0.375	0.08	0.0	3.36	0.300	0.02	10.0	3.62	0.150	−0.02	0.0	0.66	0.26
157	232	0.400	0.00	17.5	3.51	0.350	0.00	20.0	3.91	0.200	0.06	0.0	−2.79	0.40
158	233	0.425	0.00	17.5	3.45	0.350	−0.02	12.5	3.89	0.200	0.06	0.0	−2.90	0.45
159	234	0.400	0.00	15.0	3.16	0.350	−0.02	7.5	3.50	0.200	0.06	0.0	−3.47	0.34
160	235	0.400	0.00	15.0	3.11	0.350	0.00	0.0	3.49	0.200	0.08	0.0	−3.74	0.38
$Z = 76$ (Os)														
86	162	0.425	0.02	12.5	3.39	0.375	0.02	32.5	4.71	0.100	0.02	0.0	−3.43	1.32
87	163	0.425	0.02	15.0	3.33	0.375	0.02	32.5	4.69	0.125	0.00	0.0	−2.67	1.36
88	164	0.425	0.02	15.0	3.38	0.375	0.02	32.5	4.66	0.125	0.00	0.0	−2.01	1.28
89	165	0.425	0.02	17.5	3.25	0.375	0.02	32.5	4.55	0.125	0.00	0.0	−1.45	1.30
104	180	0.225	0.00	60.0	1.38	0.225	0.02	45.0	1.63	0.200	0.04	0.0	−0.82	0.25
105	181	0.225	0.00	60.0	1.09	0.225	0.02	45.0	1.40	0.200	0.06	0.0	−1.23	0.31
106	182	0.225	0.00	60.0	0.82	0.200	0.00	45.0	1.23	0.200	0.06	0.0	−1.61	0.40
107	183	0.225	0.00	60.0	0.53	0.200	0.02	45.0	0.95	0.200	0.06	0.0	−2.05	0.42
108	184	0.225	0.00	60.0	0.36	0.200	0.02	45.0	0.68	0.200	0.06	0.0	−2.13	0.32
109	185	0.225	0.00	57.5	0.11	0.200	0.02	45.0	0.32	0.200	0.08	0.0	−2.32	0.21
111	187	0.425	0.00	0.0	3.84	0.375	0.00	0.0	4.11	0.175	0.08	0.0	−2.43	0.28
112	188	0.425	0.00	0.0	3.70	0.375	0.00	0.0	4.13	0.175	0.08	0.0	−2.41	0.43
113	189	0.425	0.00	0.0	3.41	0.375	0.02	0.0	4.11	0.175	0.08	0.0	−2.78	0.71
114	190	0.425	0.00	0.0	3.44	0.350	0.04	0.0	4.09	0.150	0.06	0.0	−2.94	0.65
115	191	0.400	0.00	0.0	3.19	0.325	0.06	0.0	4.17	0.150	0.06	0.0	−3.58	0.98
116	192	0.400	0.00	0.0	3.17	0.300	0.06	0.0	4.45	0.150	0.06	0.0	−3.92	1.28
117	193	0.400	0.00	2.5	2.92	0.300	0.06	0.0	4.70	0.125	0.06	0.0	−4.44	1.78
118	194	0.400	0.02	0.0	2.97	0.300	0.06	0.0	5.03	0.125	0.06	0.0	−4.93	2.05
119	195	0.425	0.02	10.0	2.71	0.300	0.06	0.0	5.22	0.125	0.06	0.0	−5.31	2.50
120	196	0.425	0.02	10.0	2.85	0.300	0.06	0.0	5.48	0.125	0.02	60.0	−5.34	2.63
		0.425	0.02	10.0	2.85	0.300	0.06	0.0	5.48	0.100	0.04	0.0	−5.41	2.63
		0.125	0.02	60.0	−5.34	0.100	0.04	37.5	−5.07	0.100	0.04	0.0	−5.41	0.27
121	197	0.425	0.02	12.5	2.75	0.300	0.06	0.0	5.62	0.100	0.02	60.0	−6.14	2.87
122	198	0.425	0.02	12.5	3.00	0.300	0.04	0.0	5.83	0.100	0.02	60.0	−6.66	2.83
123	199	0.425	0.02	12.5	2.96	0.300	0.04	0.0	5.87	0.075	0.02	55.0	−7.65	2.90

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 76$ (Os)														
124	200	0.425	0.02	12.5	3.30	0.375	0.00	25.0	5.86	0.050	0.02	60.0	−8.24	2.56
125	201	0.425	0.04	12.5	3.23	0.375	0.00	25.0	5.62	0.000	0.00	0.0	−9.25	2.39
126	202	0.425	0.04	12.5	3.53	0.375	0.00	27.5	5.51	0.000	0.00	0.0	−9.61	1.98
127	203	0.400	0.04	0.0	3.57	0.375	0.00	27.5	5.20	0.025	0.00	57.5	−8.60	1.64
128	204	0.400	0.06	0.0	3.62	0.400	0.02	25.0	5.02	0.000	0.00	0.0	−7.54	1.40
129	205	0.400	0.06	0.0	3.35	0.400	0.02	25.0	4.68	0.025	0.00	60.0	−6.31	1.33
130	206	0.400	0.06	0.0	3.41	0.400	0.02	22.5	4.66	0.000	0.00	0.0	−5.04	1.25
131	207	0.400	0.08	0.0	3.15	0.425	0.04	20.0	4.53	0.025	0.00	0.0	−3.94	1.39
132	208	0.400	0.08	0.0	3.16	0.375	0.02	20.0	4.60	0.050	0.00	5.0	−2.81	1.43
133	209	0.400	0.08	0.0	2.89	0.375	0.02	17.5	4.45	0.075	−0.02	0.0	−2.02	1.56
134	210	0.400	0.08	0.0	3.00	0.375	0.04	17.5	4.56	0.100	−0.02	0.0	−1.23	1.56
135	211	0.375	0.08	0.0	2.91	0.300	0.02	12.5	4.36	0.100	−0.02	2.5	−0.80	1.44
136	212	0.375	0.08	0.0	3.12	0.275	0.00	10.0	4.26	0.100	−0.02	2.5	−0.16	1.14
137	213	0.375	0.08	0.0	3.05	0.300	0.02	12.5	4.05	0.125	−0.04	0.0	0.19	1.00
138	214	0.350	0.06	0.0	3.51	0.325	0.04	10.0	4.07	0.125	−0.04	0.0	0.58	0.56
139	215	0.375	0.08	0.0	3.34	0.300	0.02	10.0	3.83	0.150	−0.02	0.0	0.62	0.49
156	232	0.425	0.00	17.5	3.93	0.350	0.00	20.0	4.20	0.200	0.04	0.0	−1.79	0.28
157	233	0.425	0.00	17.5	3.56	0.350	0.00	17.5	4.15	0.200	0.06	0.0	−2.29	0.59
158	234	0.425	0.00	17.5	3.49	0.350	−0.02	12.5	4.11	0.200	0.06	0.0	−2.40	0.62
159	235	0.425	0.00	17.5	3.23	0.350	−0.02	7.5	3.70	0.200	0.06	0.0	−2.97	0.48
160	236	0.425	0.00	15.0	3.21	0.325	0.02	0.0	3.65	0.200	0.08	0.0	−3.18	0.44
$Z = 77$ (Ir)														
87	164	0.425	0.04	5.0	2.98	0.400	0.02	32.5	4.45	0.100	0.00	0.0	−3.64	1.47
88	165	0.425	0.02	12.5	3.19	0.400	0.02	32.5	4.40	0.125	0.00	15.0	−2.75	1.21
105	182	0.200	0.00	60.0	0.76	0.200	0.02	45.0	1.00	0.200	0.04	0.0	−0.90	0.24
106	183	0.200	0.00	60.0	0.48	0.200	0.02	45.0	0.79	0.200	0.06	0.0	−1.24	0.31
107	184	0.200	0.00	60.0	0.19	0.200	0.02	45.0	0.52	0.200	0.06	0.0	−1.69	0.33
108	185	0.200	0.00	57.5	−0.01	0.175	0.02	45.0	0.21	0.200	0.06	0.0	−1.77	0.21
110	187	0.400	0.00	0.0	3.65	0.375	0.00	0.0	3.89	0.175	0.06	0.0	−2.08	0.24
111	188	0.425	0.00	0.0	3.42	0.350	0.02	0.0	3.89	0.175	0.06	0.0	−2.33	0.47
112	189	0.425	0.00	0.0	3.27	0.375	0.02	0.0	3.97	0.150	0.06	0.0	−2.39	0.70
113	190	0.425	0.00	0.0	2.99	0.350	0.04	0.0	3.88	0.150	0.06	2.5	−2.90	0.89
114	191	0.425	0.00	0.0	3.02	0.325	0.06	0.0	4.08	0.150	0.06	0.0	−3.18	1.06
115	192	0.400	0.00	0.0	2.84	0.325	0.06	0.0	4.30	0.150	0.06	20.0	−3.77	1.46
116	193	0.400	0.00	0.0	2.81	0.300	0.06	0.0	4.64	0.125	0.06	0.0	−4.30	1.83
117	194	0.400	0.00	0.0	2.57	0.300	0.06	0.0	4.88	0.125	0.06	10.0	−4.95	2.32
118	195	0.400	0.02	0.0	2.59	0.300	0.06	0.0	5.19	0.125	0.06	0.0	−5.42	2.60
119	196	0.425	0.02	7.5	2.37	0.300	0.06	0.0	5.41	0.100	0.04	0.0	−5.91	3.04
120	197	0.425	0.02	7.5	2.52	0.300	0.06	0.0	5.67	0.125	0.02	60.0	−6.21	3.15
121	198	0.425	0.02	10.0	2.46	0.300	0.06	0.0	5.81	0.100	0.02	60.0	−7.06	3.35
122	199	0.425	0.02	10.0	2.71	0.375	0.00	25.0	5.94	0.075	0.02	60.0	−7.59	3.23
123	200	0.425	0.02	10.0	2.72	0.375	0.00	25.0	5.81	0.075	0.02	57.5	−8.56	3.10
124	201	0.425	0.04	10.0	2.98	0.375	0.00	27.5	5.76	0.050	0.02	60.0	−9.15	2.78
125	202	0.425	0.04	10.0	2.92	0.375	0.00	27.5	5.53	0.000	0.00	0.0	−10.14	2.60
126	203	0.425	0.04	10.0	3.21	0.375	0.00	27.5	5.36	0.000	0.00	0.0	−10.49	2.15
127	204	0.400	0.04	0.0	3.25	0.375	0.00	27.5	5.06	0.025	0.00	60.0	−9.46	1.81
128	205	0.400	0.06	0.0	3.34	0.400	0.02	25.0	4.94	0.000	0.00	0.0	−8.42	1.60
129	206	0.400	0.06	0.0	3.08	0.400	0.02	25.0	4.61	0.025	0.00	60.0	−7.17	1.54
130	207	0.400	0.06	0.0	3.13	0.400	0.02	22.5	4.64	0.000	0.00	0.0	−5.91	1.51
131	208	0.400	0.06	0.0	2.89	0.425	0.04	20.0	4.59	0.025	0.00	57.5	−4.78	1.70

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 77$ (Ir)														
132	209	0.400	0.08	0.0	2.94	0.400	0.04	17.5	4.72	0.000	0.00	0.0	−3.64	1.78
133	210	0.400	0.08	0.0	2.67	0.375	0.02	17.5	4.51	0.050	0.00	60.0	−2.72	1.84
134	211	0.400	0.08	0.0	2.78	0.375	0.02	20.0	4.55	0.075	−0.02	2.5	−1.86	1.77
135	212	0.400	0.08	0.0	2.68	0.300	0.00	17.5	4.33	0.100	−0.02	2.5	−1.42	1.65
136	213	0.375	0.06	0.0	3.03	0.300	0.00	15.0	4.27	0.100	−0.02	2.5	−0.79	1.24
137	214	0.375	0.06	0.0	2.95	0.300	0.00	12.5	4.06	0.100	−0.02	2.5	−0.35	1.11
138	215	0.375	0.06	0.0	3.27	0.325	0.04	10.0	4.15	0.125	−0.02	0.0	0.08	0.88
139	216	0.350	0.06	0.0	3.44	0.300	0.02	10.0	3.87	0.125	−0.02	0.0	0.22	0.44
140	217	0.350	0.06	0.0	3.71	0.300	0.02	7.5	3.94	0.150	−0.04	0.0	0.48	0.23
154	231	0.275	0.02	60.0	2.02	0.275	0.02	47.5	2.24	0.225	0.04	0.0	−1.39	0.22
155	232	0.275	0.02	60.0	1.76	0.225	0.00	60.0	2.06	0.200	0.04	0.0	−1.70	0.30
158	235	0.425	0.00	15.0	3.59	0.350	−0.02	7.5	4.11	0.200	0.06	0.0	−2.13	0.53
160	237	0.425	0.00	15.0	3.25	0.325	−0.02	0.0	3.77	0.175	0.06	0.0	−2.96	0.52
$Z = 78$ (Pt)														
87	165	0.425	0.04	0.0	2.52	0.375	0.00	32.5	4.26	0.100	0.00	60.0	−4.28	1.74
88	166	0.425	0.04	0.0	2.92	0.375	0.00	32.5	4.24	0.100	0.00	45.0	−3.30	1.32
89	167	0.425	0.04	10.0	3.06	0.375	0.00	32.5	4.11	0.125	0.00	30.0	−2.46	1.05
90	168	0.425	0.04	12.5	3.25	0.375	0.00	32.5	4.01	0.125	0.00	22.5	−1.78	0.76
94	172	0.325	0.00	60.0	2.62	0.275	0.00	60.0	2.84	0.125	0.02	15.0	0.15	0.22
95	173	0.325	0.02	60.0	2.70	0.275	0.00	60.0	2.97	0.150	0.02	20.0	0.38	0.27
96	174	0.325	0.02	60.0	2.83	0.275	0.00	60.0	3.08	0.150	0.02	20.0	0.61	0.25
97	175	0.325	0.02	60.0	2.80	0.275	0.00	60.0	3.10	0.150	0.02	20.0	0.79	0.29
98	176	0.325	0.04	60.0	2.85	0.275	0.00	60.0	3.08	0.225	0.00	0.0	0.84	0.23
99	177	0.325	0.04	60.0	2.73	0.275	0.00	60.0	3.01	0.225	0.00	0.0	0.72	0.28
110	188	0.400	0.00	0.0	3.48	0.350	0.02	0.0	3.79	0.175	0.06	10.0	−1.45	0.31
111	189	0.425	0.00	0.0	3.19	0.375	0.02	0.0	3.83	0.175	0.06	15.0	−1.75	0.63
113	191	0.425	0.00	0.0	2.76	0.325	0.06	0.0	3.91	0.150	0.04	27.5	−2.74	1.15
114	192	0.425	0.02	0.0	2.75	0.300	0.06	0.0	4.24	0.150	0.04	30.0	−3.23	1.49
115	193	0.425	0.02	0.0	2.46	0.300	0.06	0.0	4.53	0.150	0.04	30.0	−3.84	2.07
116	194	0.425	0.02	0.0	2.46	0.300	0.06	0.0	4.92	0.125	0.04	27.5	−4.30	2.47
117	195	0.425	0.02	0.0	2.20	0.300	0.06	0.0	5.18	0.125	0.04	27.5	−4.97	2.98
118	196	0.400	0.02	0.0	2.30	0.300	0.06	0.0	5.47	0.125	0.02	60.0	−5.46	3.18
119	197	0.425	0.02	2.5	2.11	0.300	0.06	0.0	5.65	0.125	0.02	60.0	−6.20	3.54
120	198	0.425	0.02	5.0	2.31	0.300	0.06	0.0	5.94	0.100	0.02	60.0	−6.86	3.63
121	199	0.425	0.02	7.5	2.31	0.375	0.00	25.0	5.91	0.100	0.02	60.0	−7.80	3.60
122	200	0.425	0.04	5.0	2.58	0.375	0.00	27.5	5.97	0.075	0.02	60.0	−8.39	3.39
123	201	0.425	0.04	7.5	2.51	0.375	0.00	27.5	5.83	0.075	0.02	57.5	−9.34	3.32
124	202	0.425	0.04	7.5	2.77	0.375	0.00	27.5	5.76	0.050	0.02	60.0	−9.92	2.99
125	203	0.425	0.04	7.5	2.73	0.375	0.00	27.5	5.53	0.000	0.00	0.0	−10.89	2.79
126	204	0.425	0.04	7.5	3.02	0.400	0.00	25.0	5.37	0.000	0.00	0.0	−11.22	2.35
127	205	0.400	0.04	0.0	2.95	0.400	0.00	25.0	5.11	0.025	0.00	60.0	−10.18	2.16
128	206	0.425	0.06	0.0	3.04	0.375	0.00	25.0	4.97	0.000	0.00	0.0	−9.14	1.93
129	207	0.400	0.06	0.0	2.78	0.400	0.02	22.5	4.71	0.025	0.00	60.0	−7.88	1.93
130	208	0.400	0.06	0.0	2.84	0.400	0.02	22.5	4.76	0.000	0.00	0.0	−6.62	1.92
131	209	0.400	0.06	0.0	2.59	0.425	0.04	20.0	4.63	0.025	0.00	0.0	−5.49	2.04
132	210	0.425	0.08	0.0	2.73	0.375	0.02	20.0	4.69	0.025	0.00	25.0	−4.34	1.96
133	211	0.400	0.08	0.0	2.41	0.350	0.02	17.5	4.63	0.050	0.00	55.0	−3.43	2.21
134	212	0.400	0.08	0.0	2.53	0.350	0.02	20.0	4.66	0.075	−0.02	0.0	−2.44	2.13
135	213	0.400	0.08	0.0	2.44	0.300	0.00	17.5	4.33	0.075	−0.02	2.5	−1.79	1.89
136	214	0.400	0.08	0.0	2.81	0.300	0.00	15.0	4.30	0.100	−0.02	2.5	−1.10	1.48

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 78$ (Pt)														
137	215	0.375	0.06	0.0	2.83	0.300	0.00	12.5	4.08	0.100	−0.02	2.5	−0.68	1.25
138	216	0.375	0.06	0.0	3.16	0.325	0.04	10.0	4.22	0.100	−0.02	0.0	−0.15	1.06
139	217	0.375	0.06	0.0	3.20	0.300	0.02	10.0	3.97	0.125	−0.04	0.0	0.11	0.77
140	218	0.375	0.08	0.0	3.61	0.300	0.02	7.5	4.06	0.125	−0.04	0.0	0.46	0.45
141	219	0.375	0.08	0.0	3.68	0.325	0.04	2.5	3.90	0.150	−0.04	0.0	0.39	0.22
154	232	0.275	0.02	60.0	2.10	0.225	0.00	60.0	2.42	0.225	0.04	0.0	−0.97	0.32
155	233	0.275	0.02	60.0	1.84	0.225	0.00	60.0	2.17	0.225	0.04	0.0	−1.22	0.33
160	238	0.400	0.00	12.5	3.41	0.325	−0.02	0.0	3.87	0.175	0.06	0.0	−2.40	0.46
$Z = 79$ (Au)														
89	168	0.425	0.04	5.0	2.51	0.400	0.00	30.0	3.84	0.100	0.02	52.5	−3.70	1.33
90	169	0.425	0.04	5.0	2.85	0.425	0.02	32.5	3.82	0.100	0.02	52.5	−2.87	0.97
91	170	0.425	0.04	12.5	2.90	0.400	0.00	30.0	3.64	0.325	0.00	60.0	1.69	0.74
		0.425	0.04	12.5	2.90	0.400	0.00	30.0	3.64	0.125	0.02	42.5	−2.06	0.74
		0.325	0.00	60.0	1.69	0.275	−0.02	62.5	1.98	0.125	0.02	42.5	−2.06	0.29
92	171	0.425	0.04	10.0	3.17	0.425	0.02	25.0	3.71	0.325	0.00	60.0	1.92	0.54
		0.425	0.04	10.0	3.17	0.425	0.02	25.0	3.71	0.100	0.02	35.0	−1.42	0.54
		0.325	0.00	60.0	1.92	0.275	−0.02	60.0	2.29	0.100	0.02	35.0	−1.42	0.37
93	172	0.325	0.00	60.0	1.98	0.275	−0.02	60.0	2.50	0.125	0.02	32.5	−0.96	0.51
94	173	0.325	0.00	60.0	2.19	0.275	−0.02	60.0	2.75	0.125	0.02	32.5	−0.54	0.56
95	174	0.325	0.00	60.0	2.28	0.275	−0.02	60.0	2.88	0.125	0.02	32.5	−0.16	0.59
96	175	0.325	0.02	60.0	2.47	0.275	−0.02	60.0	3.00	0.125	0.02	30.0	0.15	0.53
97	176	0.325	0.02	60.0	2.44	0.325	0.04	47.5	2.87	0.150	0.02	32.5	0.33	0.43
98	177	0.350	0.04	60.0	2.49	0.325	0.04	47.5	2.96	0.150	0.02	32.5	0.48	0.47
99	178	0.375	0.02	35.0	2.35	0.350	0.04	47.5	2.90	0.350	0.04	60.0	2.36	0.54
		0.375	0.02	35.0	2.35	0.325	0.02	30.0	2.60	0.150	0.02	30.0	0.59	0.25
		0.350	0.04	60.0	2.36	0.350	0.04	47.5	2.90	0.150	0.02	30.0	0.59	0.54
100	179	0.375	0.04	37.5	2.51	0.275	0.00	60.0	2.84	0.350	0.04	60.0	2.38	0.33
		0.375	0.04	37.5	2.51	0.325	0.02	32.5	2.76	0.150	0.02	30.0	0.62	0.25
		0.350	0.04	60.0	2.38	0.275	0.00	60.0	2.84	0.150	0.02	30.0	0.62	0.45
101	180	0.350	0.04	60.0	2.29	0.275	0.00	60.0	2.65	0.150	0.02	27.5	0.62	0.36
102	181	0.350	0.06	60.0	2.29	0.300	0.02	60.0	2.52	0.150	0.02	27.5	0.54	0.23
103	182	0.350	0.06	60.0	2.10	0.300	0.02	60.0	2.32	0.175	0.02	22.5	0.41	0.22
109	188	0.400	0.00	0.0	3.08	0.375	0.02	0.0	3.34	0.150	0.04	17.5	−1.23	0.26
110	189	0.425	0.02	0.0	3.03	0.350	0.04	0.0	3.42	0.150	0.04	27.5	−1.61	0.40
114	193	0.425	0.02	0.0	2.23	0.300	0.04	7.5	4.40	0.125	0.04	30.0	−3.78	2.16
115	194	0.425	0.02	0.0	1.96	0.300	0.04	2.5	4.68	0.125	0.04	30.0	−4.41	2.72
116	195	0.425	0.02	0.0	1.94	0.300	0.06	0.0	5.03	0.125	0.04	30.0	−4.92	3.08
117	196	0.425	0.02	0.0	1.70	0.300	0.06	0.0	5.27	0.125	0.02	47.5	−5.61	3.57
118	197	0.425	0.02	0.0	1.75	0.300	0.06	0.0	5.57	0.125	0.02	60.0	−6.29	3.82
119	198	0.425	0.02	0.0	1.60	0.375	0.00	25.0	5.64	0.100	0.02	55.0	−7.07	4.04
120	199	0.425	0.02	0.0	1.80	0.375	0.00	25.0	5.77	0.100	0.02	60.0	−7.78	3.97
121	200	0.425	0.04	0.0	1.88	0.400	0.00	27.5	5.74	0.100	0.02	60.0	−8.69	3.86
122	201	0.425	0.04	5.0	2.09	0.400	0.00	27.5	5.78	0.075	0.02	60.0	−9.33	3.69
123	202	0.425	0.04	5.0	2.08	0.400	0.00	27.5	5.65	0.075	0.02	55.0	−10.25	3.57
124	203	0.425	0.04	5.0	2.33	0.375	0.00	27.5	5.60	0.050	0.02	60.0	−10.86	3.26
125	204	0.425	0.04	7.5	2.33	0.400	0.00	30.0	5.38	0.000	0.00	0.0	−11.87	3.05
126	205	0.425	0.04	5.0	2.60	0.400	0.00	25.0	5.21	0.000	0.00	0.0	−12.19	2.61
127	206	0.425	0.06	2.5	2.51	0.400	0.00	25.0	4.98	0.025	0.00	60.0	−11.14	2.47
128	207	0.425	0.06	0.0	2.60	0.400	0.02	22.5	4.89	0.000	0.00	0.0	−10.10	2.29
129	208	0.400	0.06	0.0	2.43	0.400	0.02	22.5	4.65	0.025	0.00	60.0	−8.83	2.21

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 79$ (Au)														
130	209	0.400	0.06	0.0	2.49	0.400	0.02	22.5	4.69	0.000	0.00	0.0	−7.57	2.20
131	210	0.400	0.06	0.0	2.25	0.425	0.04	20.0	4.60	0.025	0.00	0.0	−6.45	2.35
132	211	0.400	0.08	0.0	2.37	0.375	0.02	17.5	4.70	0.025	0.00	22.5	−5.30	2.33
133	212	0.400	0.08	0.0	2.11	0.350	0.02	17.5	4.54	0.050	0.00	50.0	−4.33	2.43
134	213	0.400	0.08	0.0	2.22	0.325	0.00	20.0	4.54	0.050	0.00	50.0	−3.37	2.32
135	214	0.325	0.02	55.0	2.21	0.300	0.00	17.5	4.22	0.400	0.08	0.0	2.15	2.00
		0.325	0.02	55.0	2.21	0.275	0.00	52.5	2.51	0.075	−0.02	0.0	−2.57	0.30
		0.400	0.08	0.0	2.15	0.300	0.00	17.5	4.22	0.075	−0.02	0.0	−2.57	2.07
136	215	0.400	0.08	0.0	2.52	0.325	0.02	12.5	4.24	0.325	0.02	55.0	2.52	1.72
		0.400	0.08	0.0	2.52	0.325	0.02	12.5	4.24	0.075	−0.02	0.0	−1.82	1.72
		0.325	0.02	55.0	2.52	0.275	0.00	52.5	2.80	0.075	−0.02	0.0	−1.82	0.29
137	216	0.375	0.06	0.0	2.60	0.300	0.00	12.5	3.99	0.325	0.02	52.5	2.59	1.39
		0.375	0.06	0.0	2.60	0.300	0.00	12.5	3.99	0.100	−0.02	12.5	−1.25	1.39
		0.325	0.02	52.5	2.59	0.300	0.02	42.5	2.86	0.100	−0.02	12.5	−1.25	0.27
138	217	0.375	0.06	0.0	2.93	0.300	0.02	10.0	4.16	0.100	−0.02	5.0	−0.71	1.22
139	218	0.375	0.06	0.0	2.98	0.300	0.02	10.0	3.90	0.100	−0.02	2.5	−0.34	0.91
140	219	0.375	0.06	0.0	3.39	0.300	0.02	7.5	4.00	0.125	−0.04	0.0	0.11	0.61
141	220	0.375	0.08	0.0	3.53	0.325	0.04	2.5	3.85	0.150	−0.04	0.0	0.16	0.32
153	232	0.275	0.02	60.0	2.06	0.250	0.02	47.5	2.29	0.225	0.02	0.0	−1.08	0.22
154	233	0.275	0.02	60.0	2.03	0.225	0.00	60.0	2.30	0.225	0.04	0.0	−0.85	0.27
155	234	0.275	0.02	60.0	1.76	0.225	0.00	60.0	2.04	0.225	0.04	0.0	−1.10	0.28
159	238	0.400	0.00	12.5	3.49	0.375	0.00	10.0	3.76	0.175	0.04	0.0	−1.91	0.27
160	239	0.350	−0.02	0.0	3.38	0.325	−0.02	0.0	3.74	0.175	0.06	0.0	−2.13	0.36
$Z = 80$ (Hg)														
90	170	0.425	0.04	0.0	2.38	0.400	0.00	30.0	3.71	0.100	0.02	60.0	−3.42	1.33
91	171	0.425	0.04	0.0	2.58	0.425	0.04	25.0	3.61	0.325	0.00	57.5	1.76	1.02
		0.425	0.04	0.0	2.58	0.425	0.04	25.0	3.61	0.100	0.02	60.0	−2.64	1.02
		0.325	0.00	57.5	1.76	0.275	−0.02	57.5	2.21	0.100	0.02	60.0	−2.64	0.45
92	172	0.425	0.06	7.5	2.87	0.400	0.02	25.0	3.68	0.325	0.00	60.0	1.99	0.81
		0.425	0.06	7.5	2.87	0.400	0.02	25.0	3.68	0.100	0.02	60.0	−1.93	0.81
		0.325	0.00	60.0	1.99	0.275	−0.02	60.0	2.54	0.100	0.02	60.0	−1.93	0.55
93	173	0.425	0.06	7.5	2.97	0.375	0.02	20.0	3.60	0.350	0.00	60.0	2.01	0.63
		0.425	0.06	7.5	2.97	0.375	0.02	20.0	3.60	0.100	0.02	52.5	−1.25	0.63
		0.350	0.00	60.0	2.01	0.275	−0.02	60.0	2.74	0.100	0.02	52.5	−1.25	0.74
94	174	0.350	0.00	60.0	2.14	0.275	−0.02	60.0	3.00	0.100	0.02	60.0	−0.76	0.86
95	175	0.350	0.00	60.0	2.22	0.350	0.02	42.5	2.83	0.100	0.02	52.5	−0.24	0.61
96	176	0.350	0.02	60.0	2.36	0.350	0.04	45.0	2.95	0.125	0.02	40.0	0.07	0.60
97	177	0.350	0.02	60.0	2.33	0.350	0.04	47.5	2.87	0.125	0.02	40.0	0.34	0.54
98	178	0.350	0.02	60.0	2.44	0.350	0.04	47.5	2.93	0.125	0.02	35.0	0.54	0.49
99	179	0.375	0.04	37.5	2.27	0.350	0.04	47.5	2.83	0.350	0.04	60.0	2.33	0.50
		0.375	0.04	37.5	2.27	0.325	0.02	30.0	2.49	0.125	0.02	42.5	0.69	0.22
		0.350	0.04	60.0	2.33	0.350	0.04	47.5	2.83	0.125	0.02	42.5	0.69	0.50
100	180	0.375	0.04	37.5	2.43	0.350	0.04	45.0	2.90	0.350	0.04	60.0	2.35	0.48
		0.375	0.04	37.5	2.43	0.325	0.02	30.0	2.66	0.125	0.02	42.5	0.74	0.23
		0.350	0.04	60.0	2.35	0.350	0.04	45.0	2.90	0.125	0.02	42.5	0.74	0.55
101	181	0.350	0.04	60.0	2.25	0.375	0.04	45.0	2.80	0.250	0.02	0.0	0.93	0.55
		0.350	0.04	60.0	2.25	0.375	0.04	45.0	2.80	0.125	0.02	57.5	0.77	0.55
		0.250	0.02	0.0	0.93	0.200	0.00	12.5	1.21	0.125	0.02	57.5	0.77	0.28
102	182	0.350	0.04	60.0	2.27	0.300	0.02	60.0	2.73	0.250	0.02	0.0	0.94	0.47
		0.350	0.04	60.0	2.27	0.300	0.02	60.0	2.73	0.125	0.02	60.0	0.61	0.47

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 80$ (Hg)														
102	182	0.250	0.02	0.0	0.94	0.200	0.02	17.5	1.20	0.125	0.02	60.0	0.61	0.26
103	183	0.350	0.06	60.0	2.11	0.300	0.02	60.0	2.53	0.250	0.02	0.0	0.70	0.42
		0.350	0.06	60.0	2.11	0.300	0.02	60.0	2.53	0.150	0.02	55.0	0.52	0.42
		0.250	0.02	0.0	0.70	0.200	0.02	10.0	0.95	0.150	0.02	55.0	0.52	0.25
104	184	0.350	0.06	60.0	2.12	0.300	0.02	60.0	2.39	0.150	0.02	60.0	0.23	0.27
109	189	0.425	0.02	0.0	2.91	0.375	0.02	0.0	3.14	0.150	0.02	60.0	−1.23	0.23
110	190	0.425	0.02	0.0	2.75	0.350	0.04	0.0	3.34	0.125	0.02	60.0	−1.73	0.59
111	191	0.425	0.02	0.0	2.47	0.350	0.04	0.0	3.40	0.125	0.02	60.0	−2.14	0.93
114	194	0.425	0.02	0.0	1.95	0.300	0.04	7.5	4.45	0.100	0.02	60.0	−3.80	2.50
115	195	0.425	0.02	0.0	1.68	0.300	0.04	7.5	4.74	0.100	0.02	60.0	−4.43	3.06
116	196	0.425	0.02	0.0	1.67	0.300	0.04	17.5	5.11	0.100	0.02	60.0	−5.19	3.44
117	197	0.425	0.02	0.0	1.42	0.325	0.02	17.5	5.45	0.100	0.02	52.5	−5.91	4.03
118	198	0.425	0.02	0.0	1.48	0.375	0.00	25.0	5.56	0.100	0.02	60.0	−6.70	4.09
119	199	0.425	0.02	0.0	1.32	0.375	0.00	25.0	5.62	0.100	0.02	60.0	−7.50	4.30
120	200	0.425	0.04	0.0	1.49	0.375	0.00	25.0	5.75	0.100	0.02	60.0	−8.20	4.26
121	201	0.425	0.04	0.0	1.49	0.400	0.00	27.5	5.72	0.075	0.02	60.0	−9.17	4.24
122	202	0.425	0.04	0.0	1.71	0.375	0.00	27.5	5.78	0.075	0.02	60.0	−9.88	4.07
123	203	0.425	0.04	2.5	1.76	0.375	0.00	27.5	5.65	0.075	0.02	57.5	−10.77	3.89
124	204	0.425	0.04	0.0	2.03	0.375	0.00	27.5	5.58	0.050	0.02	60.0	−11.48	3.56
125	205	0.425	0.04	2.5	2.06	0.375	0.00	27.5	5.36	0.000	0.00	0.0	−12.56	3.30
126	206	0.425	0.06	0.0	2.21	0.400	0.00	25.0	5.25	0.000	0.00	0.0	−12.86	3.04
127	207	0.425	0.06	0.0	2.08	0.375	0.00	25.0	4.96	0.000	0.00	0.0	−11.81	2.88
128	208	0.425	0.06	0.0	2.17	0.400	0.02	22.5	4.93	0.000	0.00	0.0	−10.79	2.76
129	209	0.425	0.06	0.0	2.03	0.400	0.02	22.5	4.68	0.000	0.00	0.0	−9.47	2.65
130	210	0.425	0.06	0.0	2.13	0.400	0.02	22.5	4.73	0.000	0.00	0.0	−8.26	2.61
131	211	0.425	0.08	0.0	1.87	0.375	0.02	20.0	4.58	0.000	0.00	0.0	−7.09	2.70
132	212	0.425	0.08	0.0	1.91	0.375	0.02	17.5	4.66	0.000	0.00	0.0	−5.96	2.74
133	213	0.425	0.08	0.0	1.72	0.350	0.02	20.0	4.43	0.325	0.02	60.0	1.71	2.70
		0.425	0.08	0.0	1.72	0.350	0.02	20.0	4.43	0.000	0.00	0.0	−4.89	2.70
		0.325	0.02	60.0	1.71	0.275	0.00	60.0	1.99	0.000	0.00	0.0	−4.89	0.27
134	214	0.325	0.02	57.5	2.07	0.325	0.00	20.0	4.44	0.425	0.08	0.0	1.83	2.37
		0.325	0.02	57.5	2.07	0.275	0.00	62.5	2.42	0.050	0.00	55.0	−3.90	0.35
		0.425	0.08	0.0	1.83	0.325	0.00	20.0	4.44	0.050	0.00	55.0	−3.90	2.61
135	215	0.325	0.02	55.0	2.19	0.300	0.00	17.5	4.10	0.425	0.08	0.0	1.84	1.91
		0.325	0.02	55.0	2.19	0.275	0.00	52.5	2.65	0.050	0.00	60.0	−3.02	0.46
		0.425	0.08	0.0	1.84	0.300	0.00	17.5	4.10	0.050	0.00	60.0	−3.02	2.26
136	216	0.325	0.02	55.0	2.50	0.325	0.02	12.5	4.12	0.425	0.08	0.0	2.22	1.62
		0.325	0.02	55.0	2.50	0.275	0.00	47.5	2.92	0.050	0.00	55.0	−2.18	0.42
		0.425	0.08	0.0	2.22	0.325	0.02	12.5	4.12	0.050	0.00	55.0	−2.18	1.90
137	217	0.350	0.04	52.5	2.49	0.325	0.02	10.0	3.90	0.425	0.06	0.0	2.29	1.41
		0.350	0.04	52.5	2.49	0.300	0.00	37.5	2.91	0.075	−0.02	7.5	−1.48	0.42
		0.425	0.06	0.0	2.29	0.325	0.02	10.0	3.90	0.075	−0.02	7.5	−1.48	1.62
138	218	0.425	0.06	0.0	2.70	0.300	0.00	10.0	4.06	0.075	−0.02	7.5	−0.84	1.36
139	219	0.375	0.06	0.0	2.83	0.300	0.02	10.0	3.88	0.100	−0.04	0.0	−0.35	1.06
140	220	0.375	0.06	0.0	3.24	0.325	0.04	7.5	3.99	0.100	−0.02	7.5	0.10	0.75
141	221	0.375	0.08	0.0	3.41	0.325	0.04	5.0	3.84	0.150	−0.06	0.0	0.18	0.42
142	222	0.375	0.06	0.0	3.77	0.325	0.04	5.0	4.00	0.175	−0.04	0.0	0.48	0.23
143	223	0.375	0.08	0.0	3.85	0.350	0.08	0.0	4.05	0.175	−0.04	0.0	0.30	0.20
154	234	0.275	0.02	60.0	2.21	0.225	0.00	60.0	2.51	0.225	0.02	2.5	−0.48	0.29
155	235	0.275	0.02	60.0	1.94	0.225	0.00	60.0	2.26	0.225	0.04	0.0	−0.66	0.32

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 80$ (Hg)														
156	236	0.275	0.02	60.0	1.98	0.250	0.00	60.0	2.19	0.200	0.02	0.0	−0.50	0.21
160	240	0.350	−0.02	0.0	3.42	0.325	−0.02	0.0	3.73	0.175	0.06	0.0	−1.47	0.31
$Z = 81$ (Tl)														
92	173	0.425	0.06	5.0	2.28	0.375	0.02	17.5	3.47	0.350	0.00	60.0	1.59	1.19
		0.425	0.06	5.0	2.28	0.375	0.02	17.5	3.47	0.050	0.00	30.0	−2.50	1.19
		0.350	0.00	60.0	1.59	0.275	0.00	52.5	2.37	0.050	0.00	30.0	−2.50	0.78
93	174	0.425	0.06	7.5	2.38	0.375	0.02	17.5	3.34	0.350	0.00	60.0	1.58	0.96
		0.425	0.06	7.5	2.38	0.375	0.02	17.5	3.34	0.075	0.00	7.5	−1.78	0.96
		0.350	0.00	60.0	1.58	0.275	−0.02	60.0	2.63	0.075	0.00	7.5	−1.78	1.04
94	175	0.350	0.00	60.0	1.71	0.350	0.02	40.0	2.65	0.075	0.00	17.5	−1.26	0.94
95	176	0.350	0.00	60.0	1.79	0.350	0.02	45.0	2.54	0.075	0.00	17.5	−0.74	0.75
96	177	0.350	0.02	60.0	1.93	0.350	0.02	45.0	2.62	0.075	0.00	17.5	−0.35	0.68
97	178	0.350	0.02	60.0	1.91	0.350	0.04	45.0	2.54	0.050	0.00	12.5	0.08	0.62
98	179	0.350	0.02	60.0	2.01	0.350	0.04	47.5	2.60	0.050	0.00	12.5	0.30	0.59
99	180	0.375	0.04	60.0	1.94	0.350	0.04	47.5	2.50	0.075	0.00	35.0	0.50	0.56
100	181	0.375	0.04	60.0	1.95	0.350	0.04	47.5	2.57	0.000	0.00	0.0	0.55	0.62
101	182	0.375	0.06	57.5	1.89	0.350	0.02	37.5	2.43	0.075	0.00	37.5	0.64	0.55
102	183	0.375	0.06	60.0	1.89	0.300	0.02	60.0	2.60	0.075	0.00	60.0	0.55	0.71
103	184	0.375	0.06	60.0	1.72	0.300	0.02	60.0	2.40	0.250	0.02	0.0	0.79	0.68
		0.375	0.06	60.0	1.72	0.300	0.02	60.0	2.40	0.075	0.00	60.0	0.47	0.68
		0.250	0.02	0.0	0.79	0.225	0.02	17.5	1.04	0.075	0.00	60.0	0.47	0.25
104	185	0.375	0.06	60.0	1.75	0.300	0.02	60.0	2.25	0.100	0.00	60.0	0.25	0.50
105	186	0.375	0.06	60.0	1.61	0.300	0.02	57.5	2.02	0.100	0.00	60.0	0.08	0.41
109	190	0.425	0.02	0.0	2.41	0.350	0.04	0.0	2.83	0.075	0.00	42.5	−1.21	0.42
110	191	0.425	0.02	0.0	2.25	0.350	0.04	0.0	3.08	0.075	0.00	60.0	−1.76	0.82
111	192	0.425	0.02	0.0	1.97	0.325	0.04	0.0	3.21	0.075	0.00	47.5	−2.19	1.24
114	195	0.425	0.02	0.0	1.46	0.300	0.04	12.5	4.32	0.050	0.00	37.5	−4.08	2.86
115	196	0.425	0.02	0.0	1.20	0.300	0.02	17.5	4.60	0.050	0.00	60.0	−4.71	3.40
116	197	0.425	0.02	0.0	1.18	0.325	0.02	17.5	5.02	0.050	0.00	60.0	−5.51	3.84
117	198	0.425	0.02	0.0	0.95	0.350	0.00	22.5	5.20	0.050	0.00	60.0	−6.22	4.25
118	199	0.425	0.02	0.0	1.01	0.350	0.00	27.5	5.30	0.050	0.00	60.0	−7.06	4.29
119	200	0.425	0.04	0.0	0.82	0.375	0.00	25.0	5.41	0.050	0.00	60.0	−7.91	4.59
120	201	0.425	0.04	0.0	0.96	0.375	0.00	25.0	5.55	0.050	0.02	60.0	−8.72	4.60
121	202	0.425	0.04	0.0	0.97	0.375	0.00	25.0	5.55	0.050	0.02	60.0	−9.73	4.58
122	203	0.425	0.04	0.0	1.20	0.375	0.00	27.5	5.59	0.050	0.02	60.0	−10.55	4.39
123	204	0.425	0.04	0.0	1.27	0.375	0.00	27.5	5.45	0.050	0.02	55.0	−11.48	4.18
124	205	0.425	0.04	0.0	1.53	0.400	0.00	25.0	5.39	0.000	0.00	0.0	−12.41	3.86
125	206	0.425	0.04	2.5	1.59	0.400	0.00	25.0	5.21	0.000	0.00	0.0	−13.49	3.62
126	207	0.425	0.06	0.0	1.69	0.375	0.00	25.0	5.11	0.000	0.00	0.0	−13.78	3.42
127	208	0.425	0.06	0.0	1.59	0.400	0.02	22.5	4.84	0.000	0.00	0.0	−12.71	3.25
128	209	0.425	0.06	0.0	1.67	0.400	0.02	22.5	4.83	0.000	0.00	0.0	−11.71	3.16
129	210	0.425	0.06	0.0	1.54	0.400	0.02	20.0	4.54	0.000	0.00	0.0	−10.38	2.99
130	211	0.425	0.06	0.0	1.64	0.375	0.02	20.0	4.61	0.000	0.00	0.0	−9.15	2.97
131	212	0.425	0.08	0.0	1.40	0.375	0.02	20.0	4.39	0.000	0.00	0.0	−7.97	2.99
132	213	0.425	0.08	0.0	1.45	0.375	0.02	17.5	4.47	0.325	0.02	60.0	1.25	3.03
		0.425	0.08	0.0	1.45	0.375	0.02	17.5	4.47	0.000	0.00	0.0	−6.85	3.03
		0.325	0.02	60.0	1.25	0.275	0.00	60.0	1.56	0.000	0.00	0.0	−6.85	0.30
133	214	0.325	0.02	60.0	1.47	0.350	0.02	20.0	4.22	0.425	0.08	0.0	1.27	2.76
		0.325	0.02	60.0	1.47	0.275	0.00	60.0	1.91	0.000	0.00	0.0	−5.78	0.44
		0.425	0.08	0.0	1.27	0.350	0.02	20.0	4.22	0.000	0.00	0.0	−5.78	2.96

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 81$ (Tl)														
134	215	0.325	0.00	57.5	1.81	0.325	0.00	20.0	4.22	0.425	0.08	0.0	1.37	2.41
		0.325	0.00	57.5	1.81	0.275	0.00	55.0	2.34	0.000	0.00	0.0	−4.76	0.53
		0.425	0.08	0.0	1.37	0.325	0.00	20.0	4.22	0.000	0.00	0.0	−4.76	2.84
135	216	0.350	0.02	55.0	1.84	0.300	0.00	17.5	3.90	0.425	0.08	0.0	1.39	2.06
		0.350	0.02	55.0	1.84	0.275	0.00	47.5	2.54	0.000	0.00	0.0	−3.78	0.70
		0.425	0.08	0.0	1.39	0.300	0.00	17.5	3.90	0.000	0.00	0.0	−3.78	2.51
136	217	0.350	0.02	55.0	2.12	0.325	0.02	12.5	3.89	0.425	0.08	0.0	1.77	1.78
		0.350	0.02	55.0	2.12	0.275	0.00	45.0	2.79	0.025	0.00	50.0	−2.93	0.67
		0.425	0.08	0.0	1.77	0.325	0.02	12.5	3.89	0.025	0.00	50.0	−2.93	2.12
137	218	0.350	0.02	55.0	2.12	0.300	0.00	12.5	3.65	0.425	0.06	0.0	1.86	1.52
		0.350	0.02	55.0	2.12	0.300	0.00	37.5	2.74	0.025	0.00	47.5	−2.09	0.62
		0.425	0.06	0.0	1.86	0.300	0.00	12.5	3.65	0.025	0.00	47.5	−2.09	1.79
138	219	0.350	0.02	60.0	2.35	0.325	0.02	10.0	3.83	0.425	0.06	0.0	2.28	1.48
		0.350	0.02	60.0	2.35	0.300	0.00	32.5	2.73	0.025	0.00	60.0	−1.41	0.38
		0.425	0.06	0.0	2.28	0.325	0.02	10.0	3.83	0.025	0.00	60.0	−1.41	1.55
139	220	0.425	0.06	0.0	2.53	0.325	0.02	7.5	3.65	0.075	−0.02	7.5	−0.79	1.12
140	221	0.425	0.06	0.0	2.91	0.325	0.02	5.0	3.81	0.075	−0.02	0.0	−0.29	0.89
141	222	0.400	0.06	0.0	3.11	0.300	0.02	5.0	3.67	0.150	−0.06	0.0	−0.09	0.56
142	223	0.400	0.06	0.0	3.49	0.325	0.04	5.0	3.85	0.375	0.04	60.0	2.46	0.36
		0.400	0.06	0.0	3.49	0.325	0.04	5.0	3.85	0.150	−0.06	0.0	0.22	0.36
		0.375	0.04	60.0	2.46	0.350	0.04	50.0	2.78	0.150	−0.06	0.0	0.22	0.32
143	224	0.375	0.06	0.0	3.63	0.350	0.06	0.0	3.88	0.375	0.04	60.0	2.43	0.25
		0.375	0.06	0.0	3.63	0.350	0.06	0.0	3.88	0.175	−0.04	7.5	0.21	0.25
		0.375	0.04	60.0	2.43	0.375	0.04	50.0	2.74	0.175	−0.04	7.5	0.21	0.31
144	225	0.375	0.04	60.0	2.65	0.375	0.04	50.0	2.98	0.175	−0.04	2.5	0.38	0.33
145	226	0.375	0.04	60.0	2.68	0.375	0.04	50.0	2.98	0.175	−0.04	2.5	0.23	0.30
146	227	0.375	0.04	60.0	2.91	0.375	0.04	50.0	3.20	0.175	−0.04	0.0	0.44	0.29
147	228	0.375	0.04	60.0	2.93	0.350	0.04	50.0	3.16	0.200	−0.02	0.0	0.13	0.23
155	236	0.300	0.02	60.0	1.89	0.250	0.02	60.0	2.10	0.200	0.02	2.5	−0.54	0.22
160	241	0.350	−0.02	0.0	3.18	0.325	−0.02	0.0	3.45	0.175	0.04	0.0	−1.28	0.27
$Z = 82$ (Pb)														
93	175	0.425	0.06	2.5	2.12	0.375	0.02	15.0	3.10	0.350	0.00	60.0	1.74	0.97
		0.425	0.06	2.5	2.12	0.375	0.02	15.0	3.10	0.000	0.00	0.0	−2.12	0.97
		0.350	0.00	60.0	1.74	0.325	0.00	37.5	2.52	0.000	0.00	0.0	−2.12	0.78
94	176	0.425	0.06	5.0	2.35	0.375	0.04	15.0	3.13	0.350	0.00	60.0	1.87	0.79
		0.425	0.06	5.0	2.35	0.375	0.04	15.0	3.13	0.000	0.00	0.0	−1.58	0.79
		0.350	0.00	60.0	1.87	0.325	0.00	37.5	2.61	0.000	0.00	0.0	−1.58	0.74
95	177	0.375	0.02	60.0	1.92	0.350	0.02	40.0	2.48	0.000	0.00	0.0	−1.01	0.56
96	178	0.375	0.02	60.0	2.00	0.350	0.02	42.5	2.52	0.000	0.00	0.0	−0.68	0.52
97	179	0.425	0.06	5.0	2.61	0.375	0.04	0.0	2.91	0.375	0.02	60.0	1.98	0.30
		0.425	0.06	5.0	2.61	0.375	0.04	0.0	2.91	0.000	0.00	0.0	−0.25	0.30
		0.375	0.02	60.0	1.98	0.350	0.02	47.5	2.49	0.000	0.00	0.0	−0.25	0.51
98	180	0.375	0.04	60.0	2.08	0.350	0.04	47.5	2.57	0.000	0.00	0.0	−0.14	0.49
99	181	0.375	0.04	60.0	1.99	0.375	0.04	47.5	2.46	0.275	−0.02	15.0	1.15	0.47
		0.375	0.04	60.0	1.99	0.375	0.04	47.5	2.46	0.000	0.00	0.0	0.33	0.47
		0.275	−0.02	15.0	1.15	0.150	0.00	32.5	1.47	0.000	0.00	0.0	0.33	0.31
100	182	0.375	0.04	60.0	2.00	0.375	0.04	45.0	2.49	0.275	0.00	2.5	1.21	0.49
		0.375	0.04	60.0	2.00	0.375	0.04	45.0	2.49	0.000	0.00	0.0	0.22	0.49
		0.275	0.00	2.5	1.21	0.150	0.00	32.5	1.53	0.000	0.00	0.0	0.22	0.32
101	183	0.375	0.04	57.5	1.93	0.350	0.04	35.0	2.39	0.275	0.02	0.0	1.05	0.46

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 82$ (Pb)														
101	183	0.375	0.04	57.5	1.93	0.350	0.04	35.0	2.39	0.000	0.00	0.0	0.47	0.46
		0.275	0.02	0.0	1.05	0.150	0.00	30.0	1.56	0.000	0.00	0.0	0.47	0.51
102	184	0.375	0.06	60.0	1.95	0.350	0.02	40.0	2.72	0.275	0.02	0.0	1.11	0.77
		0.375	0.06	60.0	1.95	0.350	0.02	40.0	2.72	0.000	0.00	0.0	0.27	0.77
		0.275	0.02	0.0	1.11	0.150	0.00	60.0	1.47	0.000	0.00	0.0	0.27	0.36
103	185	0.375	0.06	60.0	1.78	0.300	0.02	60.0	2.64	0.275	0.02	0.0	0.98	0.86
		0.375	0.06	60.0	1.78	0.300	0.02	60.0	2.64	0.000	0.00	0.0	0.33	0.86
		0.275	0.02	0.0	0.98	0.175	0.00	35.0	1.36	0.000	0.00	0.0	0.33	0.38
104	186	0.375	0.06	60.0	1.81	0.300	0.02	60.0	2.50	0.250	0.02	0.0	1.04	0.68
		0.375	0.06	60.0	1.81	0.300	0.02	60.0	2.50	0.175	0.00	60.0	0.88	0.68
		0.375	0.06	60.0	1.81	0.300	0.02	60.0	2.50	0.000	0.00	0.0	0.10	0.68
		0.250	0.02	0.0	1.04	0.175	0.00	32.5	1.26	0.175	0.00	60.0	0.88	0.22
		0.250	0.02	0.0	1.04	0.175	0.00	32.5	1.26	0.000	0.00	0.0	0.10	0.22
		0.175	0.00	60.0	0.88	0.125	0.00	60.0	1.10	0.000	0.00	0.0	0.10	0.22
105	187	0.375	0.06	60.0	1.68	0.300	0.02	62.5	2.27	0.250	0.04	0.0	0.79	0.59
		0.375	0.06	60.0	1.68	0.300	0.02	62.5	2.27	0.175	0.00	60.0	0.63	0.59
		0.375	0.06	60.0	1.68	0.300	0.02	62.5	2.27	0.000	0.00	0.0	0.01	0.59
		0.250	0.04	0.0	0.79	0.175	0.02	32.5	1.11	0.175	0.00	60.0	0.63	0.32
		0.250	0.04	0.0	0.79	0.175	0.02	32.5	1.11	0.000	0.00	0.0	0.01	0.32
		0.175	0.00	60.0	0.63	0.125	0.00	60.0	0.89	0.000	0.00	0.0	0.01	0.27
106	188	0.375	0.06	60.0	1.72	0.325	0.04	60.0	2.09	0.175	0.00	60.0	0.33	0.38
		0.375	0.06	60.0	1.72	0.325	0.04	60.0	2.09	0.000	0.00	0.0	−0.29	0.38
		0.175	0.00	60.0	0.33	0.125	0.00	60.0	0.59	0.000	0.00	0.0	−0.29	0.26
107	189	0.375	0.06	60.0	1.63	0.325	0.04	60.0	1.94	0.175	0.00	60.0	0.05	0.31
		0.375	0.06	60.0	1.63	0.325	0.04	60.0	1.94	0.000	0.00	0.0	−0.52	0.31
		0.175	0.00	60.0	0.05	0.125	0.00	60.0	0.34	0.000	0.00	0.0	−0.52	0.28
109	191	0.400	0.02	0.0	2.38	0.350	0.04	0.0	2.66	0.025	0.00	2.5	−1.25	0.28
110	192	0.425	0.02	0.0	2.19	0.350	0.04	0.0	2.91	0.000	0.00	0.0	−1.86	0.71
111	193	0.425	0.02	0.0	1.91	0.300	0.04	5.0	3.09	0.025	0.00	0.0	−2.24	1.18
116	198	0.425	0.02	0.0	1.14	0.325	0.02	17.5	4.86	0.000	0.00	0.0	−5.68	3.72
117	199	0.425	0.02	0.0	0.89	0.325	0.00	17.5	5.02	0.000	0.00	0.0	−6.37	4.12
118	200	0.425	0.04	0.0	0.88	0.350	0.00	27.5	5.24	0.000	0.00	0.0	−7.21	4.36
119	201	0.425	0.04	0.0	0.68	0.375	0.00	25.0	5.35	0.000	0.00	0.0	−8.03	4.67
120	202	0.425	0.04	0.0	0.83	0.375	0.00	25.0	5.49	0.000	0.00	0.0	−8.90	4.66
121	203	0.425	0.04	0.0	0.85	0.350	0.00	20.0	5.36	0.000	0.00	0.0	−9.81	4.51
122	204	0.425	0.04	0.0	1.07	0.350	0.00	20.0	5.45	0.000	0.00	0.0	−10.73	4.37
123	205	0.425	0.04	0.0	1.15	0.375	0.00	27.5	5.44	0.000	0.00	0.0	−11.66	4.30
124	206	0.425	0.04	0.0	1.42	0.400	0.00	25.0	5.37	0.000	0.00	0.0	−12.65	3.95
125	207	0.425	0.06	0.0	1.40	0.400	0.00	25.0	5.17	0.000	0.00	0.0	−13.65	3.78
126	208	0.425	0.06	0.0	1.50	0.375	0.00	25.0	5.07	0.000	0.00	0.0	−13.93	3.56
127	209	0.425	0.06	0.0	1.39	0.400	0.02	22.5	4.75	0.000	0.00	0.0	−12.85	3.36
128	210	0.425	0.06	0.0	1.49	0.375	0.00	22.5	4.72	0.000	0.00	0.0	−11.85	3.23
129	211	0.425	0.06	0.0	1.36	0.375	0.02	22.5	4.47	0.000	0.00	0.0	−10.50	3.11
130	212	0.425	0.08	0.0	1.45	0.375	0.02	20.0	4.47	0.000	0.00	0.0	−9.30	3.02
131	213	0.425	0.08	0.0	1.16	0.375	0.02	17.5	4.25	0.000	0.00	0.0	−8.10	3.09
132	214	0.325	0.00	55.0	1.47	0.350	0.02	17.5	4.34	0.425	0.08	0.0	1.20	2.87
		0.325	0.00	55.0	1.47	0.275	0.00	60.0	1.77	0.000	0.00	0.0	−6.97	0.31
		0.425	0.08	0.0	1.20	0.350	0.02	17.5	4.34	0.000	0.00	0.0	−6.97	3.14
133	215	0.325	0.00	55.0	1.63	0.350	0.02	20.0	4.06	0.425	0.08	0.0	1.03	2.43
		0.325	0.00	55.0	1.63	0.275	0.00	52.5	2.11	0.000	0.00	0.0	−5.89	0.48

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 82$ (Pb)														
133	215	0.425	0.08	0.0	1.03	0.350	0.02	20.0	4.06	0.000	0.00	0.0	−5.89	3.03
134	216	0.350	0.02	55.0	1.90	0.325	0.00	20.0	4.05	0.425	0.08	0.0	1.13	2.15
		0.350	0.02	55.0	1.90	0.275	0.00	50.0	2.48	0.000	0.00	0.0	−4.88	0.58
		0.425	0.08	0.0	1.13	0.325	0.00	20.0	4.05	0.000	0.00	0.0	−4.88	2.92
135	217	0.350	0.02	55.0	1.93	0.300	0.00	17.5	3.73	0.425	0.08	0.0	1.15	1.80
		0.350	0.02	55.0	1.93	0.275	0.00	45.0	2.63	0.000	0.00	0.0	−3.89	0.70
		0.425	0.08	0.0	1.15	0.300	0.00	17.5	3.73	0.000	0.00	0.0	−3.89	2.59
136	218	0.350	0.02	55.0	2.22	0.300	0.00	15.0	3.71	0.425	0.08	0.0	1.55	1.49
		0.350	0.02	55.0	2.22	0.275	0.00	42.5	2.84	0.000	0.00	0.0	−3.04	0.62
		0.425	0.08	0.0	1.55	0.300	0.00	15.0	3.71	0.000	0.00	0.0	−3.04	2.16
137	219	0.350	0.02	52.5	2.19	0.300	0.00	12.5	3.50	0.425	0.06	0.0	1.69	1.31
		0.350	0.02	52.5	2.19	0.300	0.00	37.5	2.71	0.000	0.00	0.0	−2.16	0.52
		0.425	0.06	0.0	1.69	0.300	0.00	12.5	3.50	0.000	0.00	0.0	−2.16	1.80
138	220	0.350	0.02	50.0	2.43	0.325	0.02	10.0	3.66	0.425	0.06	0.0	2.12	1.22
		0.350	0.02	50.0	2.43	0.300	0.00	32.5	2.69	0.000	0.00	0.0	−1.48	0.25
		0.425	0.06	0.0	2.12	0.325	0.02	10.0	3.66	0.000	0.00	0.0	−1.48	1.53
139	221	0.425	0.06	0.0	2.37	0.325	0.02	7.5	3.46	0.025	0.00	2.5	−0.73	1.09
140	222	0.425	0.06	0.0	2.78	0.300	0.00	7.5	3.63	0.000	0.00	0.0	−0.21	0.86
141	223	0.400	0.06	0.0	2.96	0.350	0.04	7.5	3.52	0.150	−0.06	0.0	−0.04	0.57
142	224	0.400	0.06	0.0	3.35	0.325	0.04	5.0	3.71	0.375	0.04	60.0	2.50	0.36
		0.400	0.06	0.0	3.35	0.325	0.04	5.0	3.71	0.150	−0.06	0.0	0.26	0.36
		0.375	0.04	60.0	2.50	0.350	0.02	45.0	2.70	0.150	−0.06	0.0	0.26	0.21
143	225	0.375	0.06	0.0	3.47	0.350	0.06	0.0	3.77	0.375	0.04	60.0	2.46	0.29
		0.375	0.06	0.0	3.47	0.350	0.06	0.0	3.77	0.150	−0.06	0.0	0.28	0.29
		0.375	0.04	60.0	2.46	0.375	0.04	52.5	2.68	0.150	−0.06	0.0	0.28	0.22
144	226	0.375	0.04	60.0	2.68	0.375	0.04	50.0	2.92	0.175	−0.04	0.0	0.48	0.24
145	227	0.375	0.04	60.0	2.71	0.375	0.04	50.0	2.92	0.175	−0.04	0.0	0.33	0.21
160	242	0.350	−0.02	0.0	3.17	0.325	−0.02	0.0	3.38	0.175	0.04	7.5	−0.80	0.22
$Z = 83$ (Bi)														
95	178	0.425	0.06	5.0	1.90	0.375	0.04	12.5	2.60	0.375	0.02	60.0	1.93	0.68
		0.425	0.06	5.0	1.90	0.375	0.04	12.5	2.60	0.075	−0.02	0.0	−0.01	0.70
		0.375	0.02	60.0	1.93	0.350	0.02	47.5	2.34	0.075	−0.02	0.0	−0.01	0.42
96	179	0.425	0.06	5.0	2.12	0.375	0.04	0.0	2.67	0.375	0.02	60.0	2.00	0.56
		0.425	0.06	5.0	2.12	0.375	0.04	0.0	2.67	0.075	−0.02	0.0	0.40	0.56
		0.375	0.02	60.0	2.00	0.375	0.02	47.5	2.46	0.075	−0.02	0.0	0.40	0.46
97	180	0.425	0.06	5.0	2.12	0.375	0.04	0.0	2.55	0.375	0.02	60.0	1.98	0.43
		0.425	0.06	5.0	2.12	0.375	0.04	0.0	2.55	0.075	−0.02	2.5	0.81	0.43
		0.375	0.02	60.0	1.98	0.375	0.02	50.0	2.41	0.075	−0.02	2.5	0.81	0.43
98	181	0.375	0.04	60.0	2.07	0.375	0.04	47.5	2.42	0.250	−0.02	15.0	0.99	0.34
		0.375	0.04	60.0	2.07	0.375	0.04	47.5	2.42	0.075	−0.02	0.0	1.04	0.34
		0.250	−0.02	15.0	0.99	0.175	−0.04	10.0	1.28	0.075	−0.02	0.0	1.04	0.24
99	182	0.375	0.04	60.0	1.98	0.375	0.04	47.5	2.29	0.275	−0.02	12.5	0.98	0.31
100	183	0.375	0.04	60.0	1.99	0.375	0.04	47.5	2.32	0.275	0.00	0.0	0.98	0.33
101	184	0.375	0.04	57.5	1.91	0.350	0.02	37.5	2.22	0.275	0.00	0.0	0.89	0.31
102	185	0.375	0.06	60.0	1.93	0.350	0.04	42.5	2.51	0.050	−0.02	60.0	1.35	0.57
		0.375	0.06	60.0	1.93	0.350	0.04	42.5	2.51	0.300	0.02	0.0	0.99	0.57
		0.050	−0.02	60.0	1.35	0.150	−0.02	15.0	1.68	0.300	0.02	0.0	0.99	0.34
103	186	0.375	0.06	60.0	1.76	0.325	0.02	47.5	2.49	0.075	−0.02	57.5	1.31	0.73
		0.375	0.06	60.0	1.76	0.325	0.02	47.5	2.49	0.275	0.02	0.0	0.86	0.73
		0.075	−0.02	57.5	1.31	0.175	0.00	10.0	1.53	0.275	0.02	0.0	0.86	0.22

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 83$ (Bi)														
104	187	0.375	0.06	60.0	1.79	0.300	0.02	60.0	2.39	0.275	0.02	0.0	1.05	0.61
		0.375	0.06	60.0	1.79	0.300	0.02	60.0	2.39	0.075	−0.02	60.0	1.10	0.61
		0.375	0.06	60.0	1.79	0.300	0.02	60.0	2.39	0.200	0.00	60.0	1.03	0.61
		0.275	0.02	0.0	1.05	0.150	0.00	15.0	1.49	0.075	−0.02	60.0	1.10	0.39
		0.275	0.02	0.0	1.05	0.200	0.00	37.5	1.32	0.200	0.00	60.0	1.03	0.27
		0.075	−0.02	60.0	1.10	0.150	0.00	15.0	1.49	0.200	0.00	60.0	1.03	0.39
105	188	0.375	0.06	60.0	1.65	0.325	0.04	60.0	2.14	0.075	−0.02	45.0	0.94	0.49
		0.375	0.06	60.0	1.65	0.325	0.04	60.0	2.14	0.275	0.04	0.0	0.90	0.49
		0.375	0.06	60.0	1.65	0.325	0.04	60.0	2.14	0.200	0.00	60.0	0.76	0.49
		0.075	−0.02	45.0	0.94	0.150	−0.02	60.0	1.24	0.275	0.04	0.0	0.90	0.30
		0.075	−0.02	45.0	0.94	0.150	−0.02	60.0	1.24	0.200	0.00	60.0	0.76	0.30
		0.275	0.04	0.0	0.90	0.200	0.00	37.5	1.16	0.200	0.00	60.0	0.76	0.26
106	189	0.375	0.06	60.0	1.69	0.325	0.04	60.0	2.12	0.225	0.02	17.5	0.88	0.43
		0.375	0.06	60.0	1.69	0.325	0.04	60.0	2.12	0.075	−0.02	45.0	0.63	0.43
		0.375	0.06	60.0	1.69	0.325	0.04	60.0	2.12	0.200	0.00	60.0	0.45	0.43
		0.225	0.02	17.5	0.88	0.200	0.00	32.5	1.09	0.075	−0.02	45.0	0.63	0.21
		0.225	0.02	17.5	0.88	0.200	0.00	32.5	1.09	0.200	0.00	60.0	0.45	0.21
		0.075	−0.02	45.0	0.63	0.150	0.00	60.0	0.95	0.200	0.00	60.0	0.45	0.32
107	190	0.375	0.06	60.0	1.60	0.325	0.04	60.0	1.98	0.200	0.02	20.0	0.63	0.38
		0.375	0.06	60.0	1.60	0.325	0.04	60.0	1.98	0.075	−0.02	2.5	0.36	0.38
		0.375	0.06	60.0	1.60	0.325	0.04	60.0	1.98	0.200	0.00	60.0	0.16	0.38
		0.200	0.02	20.0	0.63	0.150	0.00	12.5	0.89	0.075	−0.02	2.5	0.36	0.26
		0.200	0.02	20.0	0.63	0.150	0.00	12.5	0.89	0.200	0.00	60.0	0.16	0.26
		0.075	−0.02	2.5	0.36	0.150	0.00	60.0	0.69	0.200	0.00	60.0	0.16	0.33
108	191	0.075	−0.02	2.5	−0.06	0.125	0.00	60.0	0.34	0.200	0.00	60.0	−0.08	0.40
109	192	0.400	0.02	0.0	2.02	0.325	0.02	0.0	2.35	0.200	0.00	60.0	−0.34	0.33
		0.400	0.02	0.0	2.02	0.325	0.02	0.0	2.35	0.075	−0.02	0.0	−0.44	0.33
		0.200	0.00	60.0	−0.34	0.125	0.00	60.0	0.02	0.075	−0.02	0.0	−0.44	0.36
110	193	0.425	0.02	0.0	1.86	0.325	0.04	0.0	2.64	0.050	0.00	60.0	−0.94	0.78
111	194	0.425	0.02	0.0	1.59	0.300	0.02	5.0	2.90	0.175	0.00	60.0	−0.95	1.31
		0.425	0.02	0.0	1.59	0.300	0.02	5.0	2.90	0.075	0.00	17.5	−1.42	1.31
		0.175	0.00	60.0	−0.95	0.150	0.00	52.5	−0.72	0.075	0.00	17.5	−1.42	0.23
114	197	0.425	0.02	0.0	1.08	0.275	0.02	15.0	3.95	0.050	0.00	30.0	−3.34	2.87
115	198	0.425	0.02	0.0	0.83	0.300	0.02	20.0	4.24	0.050	0.00	55.0	−3.96	3.41
116	199	0.425	0.04	60.0	1.34	0.325	0.00	20.0	4.59	0.425	0.04	0.0	0.81	3.25
		0.425	0.04	60.0	1.34	0.375	0.02	60.0	1.62	0.050	0.00	57.5	−4.75	0.28
		0.425	0.04	0.0	0.81	0.325	0.00	20.0	4.59	0.050	0.00	57.5	−4.75	3.79
117	200	0.425	0.04	60.0	1.02	0.325	0.00	20.0	4.72	0.425	0.04	0.0	0.52	3.70
		0.425	0.04	60.0	1.02	0.375	0.00	60.0	1.30	0.050	0.00	60.0	−5.45	0.28
		0.425	0.04	0.0	0.52	0.325	0.00	20.0	4.72	0.050	0.00	60.0	−5.45	4.20
118	201	0.425	0.04	0.0	0.48	0.300	0.00	20.0	4.93	0.050	0.00	57.5	−6.29	4.44
119	202	0.425	0.04	0.0	0.30	0.300	0.00	20.0	5.00	0.050	0.00	55.0	−7.12	4.70
120	203	0.425	0.04	0.0	0.43	0.325	0.00	22.5	5.13	0.050	0.00	60.0	−7.92	4.70
121	204	0.425	0.04	0.0	0.46	0.325	0.00	22.5	5.11	0.050	0.00	60.0	−8.90	4.65
122	205	0.425	0.04	0.0	0.69	0.325	0.00	22.5	5.17	0.025	0.00	60.0	−9.70	4.49
123	206	0.425	0.04	0.0	0.79	0.350	0.00	20.0	5.05	0.025	0.00	47.5	−10.65	4.26
124	207	0.425	0.04	0.0	1.08	0.350	0.00	20.0	5.06	0.025	0.00	57.5	−11.55	3.98
125	208	0.425	0.06	0.0	1.00	0.375	0.00	25.0	4.97	0.025	0.00	57.5	−12.51	3.96
126	209	0.425	0.06	0.0	1.11	0.350	0.00	25.0	4.76	0.000	0.00	0.0	−12.78	3.65
127	210	0.425	0.06	0.0	1.02	0.400	0.02	22.5	4.52	0.025	0.00	60.0	−11.80	3.50

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 83$ (Bi)														
128	211	0.425	0.06	0.0	1.11	0.350	0.00	22.5	4.47	0.000	0.00	0.0	−10.73	3.36
129	212	0.425	0.06	0.0	1.01	0.375	0.02	20.0	4.17	0.025	0.00	60.0	−9.49	3.16
130	213	0.425	0.08	0.0	1.06	0.375	0.02	20.0	4.16	0.025	0.00	57.5	−8.22	3.10
131	214	0.425	0.08	0.0	0.80	0.375	0.02	17.5	3.94	0.025	0.00	55.0	−7.10	3.15
132	215	0.425	0.08	0.0	0.82	0.350	0.02	17.5	3.99	0.025	0.00	60.0	−5.98	3.17
133	216	0.350	0.02	55.0	1.66	0.350	0.02	20.0	3.75	0.425	0.08	0.0	0.66	2.09
		0.350	0.02	55.0	1.66	0.275	0.00	52.5	1.99	0.025	0.00	57.5	−4.92	0.32
		0.425	0.08	0.0	0.66	0.350	0.02	20.0	3.75	0.025	0.00	57.5	−4.92	3.09
134	217	0.350	0.02	55.0	1.92	0.325	0.00	20.0	3.77	0.425	0.08	0.0	0.78	1.85
		0.350	0.02	55.0	1.92	0.275	0.00	50.0	2.36	0.025	0.00	57.5	−3.96	0.44
		0.425	0.08	0.0	0.78	0.325	0.00	20.0	3.77	0.025	0.00	57.5	−3.96	2.99
135	218	0.350	0.02	52.5	1.92	0.325	0.00	17.5	3.44	0.425	0.08	0.0	0.81	1.52
		0.350	0.02	52.5	1.92	0.275	0.00	45.0	2.48	0.050	−0.02	0.0	−3.05	0.56
		0.425	0.08	0.0	0.81	0.325	0.00	17.5	3.44	0.050	−0.02	0.0	−3.05	2.63
136	219	0.350	0.02	52.5	2.19	0.300	0.00	15.0	3.43	0.425	0.08	0.0	1.21	1.23
		0.350	0.02	52.5	2.19	0.275	0.00	42.5	2.69	0.050	−0.02	0.0	−2.27	0.49
		0.425	0.08	0.0	1.21	0.300	0.00	15.0	3.43	0.050	−0.02	0.0	−2.27	2.22
137	220	0.350	0.02	50.0	2.15	0.300	0.00	12.5	3.20	0.425	0.08	0.0	1.39	1.05
		0.350	0.02	50.0	2.15	0.300	0.00	37.5	2.52	0.075	−0.04	0.0	−1.62	0.37
		0.425	0.08	0.0	1.39	0.300	0.00	12.5	3.20	0.075	−0.04	0.0	−1.62	1.80
138	221	0.425	0.06	0.0	1.83	0.325	0.02	10.0	3.34	0.075	−0.04	0.0	−0.99	1.51
139	222	0.425	0.06	0.0	2.10	0.325	0.02	7.5	3.16	0.100	−0.06	0.0	−0.60	1.06
140	223	0.425	0.06	0.0	2.49	0.325	0.02	5.0	3.33	0.125	−0.06	0.0	−0.21	0.84
141	224	0.400	0.06	0.0	2.65	0.325	0.02	10.0	3.21	0.150	−0.06	0.0	−0.22	0.56
142	225	0.400	0.06	0.0	3.03	0.325	0.02	5.0	3.45	0.150	−0.06	0.0	0.07	0.42
143	226	0.400	0.06	0.0	3.17	0.350	0.06	0.0	3.49	0.150	−0.06	0.0	0.09	0.32
144	227	0.400	0.06	0.0	3.53	0.350	0.06	10.0	3.77	0.175	−0.04	0.0	0.43	0.25
160	243	0.350	−0.02	0.0	2.88	0.300	0.00	0.0	3.24	0.175	0.04	12.5	−0.69	0.37
$Z = 84$ (Po)														
97	181	0.425	0.06	5.0	2.07	0.375	0.04	0.0	2.50	0.225	−0.04	17.5	0.83	0.43
98	182	0.425	0.06	5.0	2.26	0.400	0.06	2.5	2.47	0.275	−0.02	12.5	0.85	0.21
102	186	0.375	0.04	52.5	2.30	0.350	0.02	42.5	2.54	0.300	0.02	0.0	0.76	0.24
103	187	0.375	0.04	50.0	2.14	0.325	0.02	42.5	2.58	0.300	0.02	0.0	0.76	0.43
104	188	0.375	0.04	50.0	2.20	0.325	0.02	42.5	2.69	0.275	0.02	0.0	0.96	0.49
105	189	0.375	0.06	60.0	2.09	0.325	0.02	45.0	2.53	0.225	0.00	60.0	1.23	0.44
		0.375	0.06	60.0	2.09	0.325	0.02	45.0	2.53	0.275	0.04	0.0	0.90	0.44
		0.225	0.00	60.0	1.23	0.225	0.00	42.5	1.45	0.275	0.04	0.0	0.90	0.22
106	190	0.375	0.06	60.0	2.12	0.325	0.04	60.0	2.41	0.225	0.02	17.5	1.02	0.30
		0.375	0.06	60.0	2.12	0.325	0.04	60.0	2.41	0.225	0.00	60.0	0.92	0.30
		0.225	0.02	17.5	1.02	0.225	0.00	35.0	1.38	0.225	0.00	60.0	0.92	0.37
107	191	0.375	0.06	60.0	2.03	0.325	0.04	60.0	2.27	0.250	0.04	12.5	0.82	0.24
		0.375	0.06	60.0	2.03	0.325	0.04	60.0	2.27	0.200	0.00	60.0	0.59	0.24
		0.250	0.04	12.5	0.82	0.200	0.00	32.5	1.17	0.200	0.00	60.0	0.59	0.36
108	192	0.100	−0.02	2.5	0.90	0.125	−0.02	60.0	1.12	0.200	0.00	60.0	0.35	0.22
109	193	0.100	−0.02	0.0	0.53	0.125	−0.02	60.0	0.82	0.200	0.00	60.0	0.08	0.29
110	194	0.425	0.02	0.0	2.00	0.350	0.02	0.0	2.39	0.075	0.00	0.0	0.06	0.40
		0.425	0.02	0.0	2.00	0.350	0.02	0.0	2.39	0.200	0.00	60.0	−0.17	0.40
		0.075	0.00	0.0	0.06	0.125	0.00	40.0	0.40	0.200	0.00	60.0	−0.17	0.34
111	195	0.425	0.02	0.0	1.72	0.300	0.02	7.5	2.67	0.075	0.00	2.5	−0.41	0.94
		0.425	0.02	0.0	1.72	0.300	0.02	7.5	2.67	0.200	0.00	60.0	−0.46	0.94

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 84$ (Po)														
111	195	0.075	0.00	2.5	−0.41	0.125	0.00	40.0	−0.05	0.200	0.00	60.0	−0.46	0.35
114	198	0.425	0.02	0.0	1.22	0.275	0.02	17.5	3.84	0.075	0.00	12.5	−2.23	2.62
115	199	0.425	0.04	60.0	1.71	0.300	0.02	15.0	4.12	0.425	0.02	0.0	0.98	2.41
		0.425	0.04	60.0	1.71	0.375	0.02	60.0	2.07	0.075	0.00	15.0	−2.87	0.36
		0.425	0.02	0.0	0.98	0.300	0.02	15.0	4.12	0.075	0.00	15.0	−2.87	3.15
116	200	0.425	0.04	60.0	1.55	0.300	0.02	22.5	4.43	0.425	0.04	0.0	0.91	2.88
		0.425	0.04	60.0	1.55	0.375	0.02	60.0	2.03	0.050	0.00	10.0	−3.61	0.48
		0.425	0.04	0.0	0.91	0.300	0.02	22.5	4.43	0.050	0.00	10.0	−3.61	3.52
117	201	0.425	0.04	60.0	1.23	0.300	0.00	22.5	4.53	0.425	0.04	0.0	0.62	3.30
		0.425	0.04	60.0	1.23	0.375	0.00	60.0	1.68	0.050	0.00	0.0	−4.32	0.46
		0.425	0.04	0.0	0.62	0.300	0.00	22.5	4.53	0.050	0.00	0.0	−4.32	3.91
118	202	0.425	0.04	60.0	1.25	0.325	0.00	20.0	4.77	0.425	0.04	0.0	0.58	3.52
		0.425	0.04	60.0	1.25	0.375	0.00	60.0	1.54	0.050	0.00	60.0	−5.13	0.29
		0.425	0.04	0.0	0.58	0.325	0.00	20.0	4.77	0.050	0.00	60.0	−5.13	4.18
119	203	0.425	0.04	0.0	0.40	0.350	0.00	22.5	4.86	0.050	0.00	50.0	−5.96	4.46
120	204	0.425	0.04	0.0	0.53	0.350	0.00	22.5	5.04	0.050	0.00	60.0	−6.75	4.51
121	205	0.425	0.04	0.0	0.55	0.325	0.00	22.5	4.97	0.050	0.00	60.0	−7.73	4.42
122	206	0.425	0.04	0.0	0.79	0.325	0.00	22.5	5.03	0.000	0.00	0.0	−8.56	4.24
123	207	0.425	0.04	2.5	0.89	0.325	0.00	22.5	4.93	0.025	0.00	0.0	−9.51	4.04
124	208	0.425	0.06	0.0	1.09	0.325	0.00	22.5	4.90	0.000	0.00	0.0	−10.50	3.81
125	209	0.425	0.06	0.0	1.02	0.325	0.00	22.5	4.73	0.000	0.00	0.0	−11.52	3.71
126	210	0.425	0.06	0.0	1.15	0.350	0.00	25.0	4.63	0.000	0.00	0.0	−11.78	3.48
127	211	0.425	0.06	0.0	1.05	0.350	0.00	22.5	4.43	0.000	0.00	0.0	−10.70	3.38
128	212	0.425	0.06	0.0	1.15	0.350	0.00	22.5	4.27	0.000	0.00	0.0	−9.74	3.12
129	213	0.425	0.08	0.0	0.98	0.375	0.02	20.0	3.96	0.000	0.00	0.0	−8.39	2.98
130	214	0.425	0.08	0.0	0.98	0.375	0.02	20.0	3.96	0.000	0.00	0.0	−7.21	2.98
131	215	0.425	0.08	0.0	0.70	0.350	0.00	20.0	3.74	0.000	0.00	0.0	−6.03	3.03
132	216	0.425	0.08	0.0	0.75	0.375	0.02	20.0	3.77	0.000	0.00	0.0	−4.93	3.03
133	217	0.325	0.00	50.0	1.91	0.350	0.00	30.0	3.57	0.425	0.08	0.0	0.58	1.65
		0.325	0.00	50.0	1.91	0.275	0.00	47.5	2.14	0.000	0.00	0.0	−3.87	0.23
		0.425	0.08	0.0	0.58	0.350	0.00	30.0	3.57	0.000	0.00	0.0	−3.87	2.99
134	218	0.350	0.02	50.0	2.21	0.300	−0.02	22.5	3.56	0.425	0.08	0.0	0.69	1.35
		0.350	0.02	50.0	2.21	0.275	0.00	45.0	2.47	0.000	0.00	0.0	−2.89	0.26
		0.425	0.08	0.0	0.69	0.300	−0.02	22.5	3.56	0.000	0.00	0.0	−2.89	2.87
135	219	0.350	0.02	50.0	2.16	0.300	−0.02	20.0	3.26	0.425	0.08	0.0	0.72	1.10
		0.350	0.02	50.0	2.16	0.275	0.00	40.0	2.51	0.075	−0.04	0.0	−2.16	0.35
		0.425	0.08	0.0	0.72	0.300	−0.02	20.0	3.26	0.075	−0.04	0.0	−2.16	2.54
136	220	0.350	0.02	47.5	2.37	0.325	0.02	15.0	3.24	0.425	0.08	0.0	1.14	0.87
		0.350	0.02	47.5	2.37	0.300	0.00	40.0	2.66	0.075	−0.04	0.0	−1.42	0.29
		0.425	0.08	0.0	1.14	0.325	0.02	15.0	3.24	0.075	−0.04	0.0	−1.42	2.10
137	221	0.350	0.02	45.0	2.26	0.325	0.02	12.5	2.98	0.425	0.08	0.0	1.33	0.72
		0.350	0.02	45.0	2.26	0.300	0.00	37.5	2.49	0.100	−0.06	0.0	−1.05	0.23
		0.425	0.08	0.0	1.33	0.325	0.02	12.5	2.98	0.100	−0.06	0.0	−1.05	1.65
138	222	0.425	0.08	0.0	1.85	0.325	0.02	10.0	3.10	0.100	−0.06	0.0	−0.51	1.25
139	223	0.375	0.06	0.0	2.00	0.300	0.00	10.0	2.93	0.125	−0.08	0.0	−0.43	0.93
140	224	0.375	0.06	0.0	2.42	0.300	0.00	7.5	3.12	0.125	−0.06	0.0	−0.06	0.69
141	225	0.400	0.06	0.0	2.64	0.325	0.02	2.5	2.97	0.150	−0.06	0.0	−0.11	0.33
142	226	0.375	0.06	0.0	2.95	0.350	0.04	0.0	3.27	0.150	−0.06	0.0	0.19	0.31
143	227	0.375	0.06	0.0	3.08	0.350	0.04	10.0	3.40	0.175	−0.06	7.5	0.19	0.32
160	244	0.350	−0.02	0.0	2.85	0.300	0.00	0.0	3.18	0.175	0.04	7.5	−0.33	0.33

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 85$ (At)														
104	189	0.400	0.04	50.0	2.20	0.325	0.02	42.5	2.52	0.350	0.02	0.0	0.69	0.33
105	190	0.400	0.04	50.0	2.10	0.325	0.02	45.0	2.42	0.275	0.02	0.0	0.73	0.33
106	191	0.375	0.04	50.0	2.23	0.325	0.04	60.0	2.46	0.250	0.02	12.5	0.96	0.23
		0.375	0.04	50.0	2.23	0.325	0.04	60.0	2.46	0.225	0.00	60.0	0.81	0.23
		0.250	0.02	12.5	0.96	0.225	0.00	35.0	1.23	0.225	0.00	60.0	0.81	0.27
107	192	0.225	0.02	17.5	0.77	0.225	0.00	35.0	1.10	0.225	0.00	60.0	0.50	0.33
110	195	0.400	0.02	0.0	1.89	0.300	0.02	10.0	2.10	0.100	−0.02	0.0	0.54	0.22
		0.400	0.02	0.0	1.89	0.300	0.02	10.0	2.10	0.200	0.00	60.0	−0.10	0.22
		0.100	−0.02	0.0	0.54	0.150	0.00	30.0	0.76	0.200	0.00	60.0	−0.10	0.22
111	196	0.400	0.02	0.0	1.77	0.275	0.04	15.0	2.41	0.100	−0.02	0.0	0.09	0.65
		0.400	0.02	0.0	1.77	0.275	0.04	15.0	2.41	0.200	0.00	60.0	−0.40	0.65
		0.100	−0.02	0.0	0.09	0.150	0.00	30.0	0.31	0.200	0.00	60.0	−0.40	0.22
112	197	0.400	0.04	60.0	2.40	0.375	0.04	60.0	2.60	0.100	0.00	0.0	−0.42	0.20
		0.400	0.04	60.0	2.40	0.375	0.04	60.0	2.60	0.200	0.00	60.0	−0.68	0.20
		0.100	0.00	0.0	−0.42	0.150	0.00	40.0	−0.14	0.200	0.00	60.0	−0.68	0.28
113	198	0.425	0.04	60.0	2.18	0.375	0.02	60.0	2.47	0.100	0.00	0.0	−0.98	0.30
		0.425	0.04	60.0	2.18	0.375	0.02	60.0	2.47	0.200	0.00	60.0	−1.05	0.30
		0.100	0.00	0.0	−0.98	0.150	0.00	42.5	−0.68	0.200	0.00	60.0	−1.05	0.30
114	199	0.425	0.04	60.0	2.01	0.375	0.02	60.0	2.45	0.200	0.00	60.0	−1.37	0.44
		0.425	0.04	60.0	2.01	0.375	0.02	60.0	2.45	0.100	0.00	20.0	−1.51	0.44
		0.200	0.00	60.0	−1.37	0.150	0.00	55.0	−1.16	0.100	0.00	20.0	−1.51	0.21
115	200	0.425	0.04	60.0	1.61	0.300	0.02	17.5	3.86	0.425	0.02	0.0	1.01	2.26
		0.425	0.04	60.0	1.61	0.375	0.02	60.0	2.24	0.100	0.00	20.0	−2.13	0.63
		0.425	0.02	0.0	1.01	0.300	0.02	17.5	3.86	0.100	0.00	20.0	−2.13	2.86
116	201	0.425	0.04	60.0	1.43	0.325	0.00	22.5	4.18	0.400	0.02	0.0	0.90	2.75
		0.425	0.04	60.0	1.43	0.375	0.00	60.0	2.15	0.075	0.00	30.0	−2.80	0.72
		0.400	0.02	0.0	0.90	0.325	0.00	22.5	4.18	0.075	0.00	30.0	−2.80	3.29
117	202	0.400	0.02	0.0	0.64	0.300	0.00	22.5	4.28	0.075	0.00	0.0	−3.46	3.64
118	203	0.400	0.02	0.0	0.56	0.300	0.00	22.5	4.44	0.075	0.00	60.0	−4.29	3.88
119	204	0.400	0.02	0.0	0.43	0.325	0.00	20.0	4.51	0.075	0.00	60.0	−5.11	4.08
120	205	0.425	0.04	0.0	0.63	0.325	0.00	20.0	4.65	0.075	0.00	60.0	−5.85	4.02
121	206	0.425	0.04	0.0	0.67	0.325	0.00	20.0	4.64	0.075	0.00	60.0	−6.79	3.97
122	207	0.425	0.04	0.0	0.89	0.325	0.00	20.0	4.69	0.050	0.00	60.0	−7.54	3.80
123	208	0.425	0.04	2.5	1.00	0.325	0.00	22.5	4.61	0.050	0.00	55.0	−8.44	3.61
124	209	0.425	0.06	0.0	1.11	0.350	0.00	22.5	4.62	0.025	0.00	60.0	−9.26	3.51
125	210	0.425	0.06	0.0	1.06	0.350	0.00	22.5	4.42	0.025	0.00	60.0	−10.19	3.37
126	211	0.425	0.06	0.0	1.17	0.325	0.00	22.5	4.32	0.000	0.00	0.0	−10.45	3.15
127	212	0.425	0.06	0.0	1.09	0.350	0.00	22.5	4.08	0.025	0.00	57.5	−9.47	2.99
128	213	0.425	0.08	0.0	1.09	0.350	0.00	22.5	3.93	0.000	0.00	0.0	−8.43	2.85
129	214	0.425	0.08	0.0	0.85	0.350	0.00	30.0	3.68	0.025	0.00	60.0	−7.21	2.83
130	215	0.425	0.08	0.0	0.87	0.375	0.00	30.0	3.67	0.025	0.00	57.5	−5.96	2.81
131	216	0.425	0.08	0.0	0.60	0.375	0.02	30.0	3.47	0.025	0.00	45.0	−4.84	2.87
132	217	0.425	0.08	0.0	0.63	0.375	0.02	30.0	3.53	0.025	0.00	60.0	−3.77	2.90
133	218	0.425	0.10	0.0	0.46	0.325	0.00	22.5	3.35	0.075	−0.04	2.5	−2.96	2.88
134	219	0.425	0.10	0.0	0.51	0.300	−0.02	22.5	3.29	0.075	−0.04	0.0	−2.18	2.78
135	220	0.350	0.02	47.5	2.15	0.300	−0.02	22.5	2.95	0.425	0.08	0.0	0.61	0.80
		0.350	0.02	47.5	2.15	0.300	0.00	42.5	2.36	0.100	−0.06	0.0	−1.77	0.21
		0.425	0.08	0.0	0.61	0.300	−0.02	22.5	2.95	0.100	−0.06	0.0	−1.77	2.34
136	221	0.425	0.08	0.0	1.02	0.325	0.00	17.5	2.91	0.100	−0.06	0.0	−1.18	1.89
137	222	0.425	0.08	0.0	1.23	0.325	0.02	12.5	2.61	0.125	−0.08	0.0	−0.88	1.38

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 85$ (At)														
138	223	0.375	0.06	0.0	1.65	0.325	0.02	10.0	2.70	0.125	−0.08	0.0	−0.50	1.05
139	224	0.375	0.06	0.0	1.72	0.325	0.02	10.0	2.56	0.125	−0.08	0.0	−0.47	0.84
140	225	0.375	0.06	0.0	2.13	0.325	0.02	7.5	2.69	0.150	−0.08	0.0	−0.15	0.56
141	226	0.375	0.04	0.0	2.30	0.325	0.02	5.0	2.57	0.150	−0.08	0.0	−0.22	0.27
142	227	0.375	0.06	0.0	2.66	0.350	0.04	0.0	2.90	0.150	−0.06	0.0	0.07	0.24
143	228	0.375	0.06	0.0	2.79	0.350	0.04	7.5	3.04	0.175	−0.06	7.5	0.00	0.26
160	245	0.350	−0.02	0.0	2.53	0.300	0.00	0.0	2.88	0.175	0.04	0.0	−0.20	0.35
$Z = 86$ (Rn)														
105	191	0.375	0.04	47.5	2.31	0.325	0.02	45.0	2.54	0.325	0.00	0.0	0.51	0.23
106	192	0.400	0.04	50.0	2.51	0.350	0.02	47.5	2.74	0.325	0.00	0.0	0.81	0.23
107	193	0.225	0.00	60.0	0.88	0.225	0.00	35.0	1.23	0.250	0.02	15.0	0.76	0.35
108	194	0.250	0.04	15.0	0.99	0.225	0.00	32.5	1.23	0.225	0.00	60.0	0.68	0.24
110	196	0.325	0.02	0.0	1.72	0.275	0.04	15.0	1.94	0.225	0.00	60.0	0.24	0.21
111	197	0.325	0.02	0.0	1.91	0.275	0.04	17.5	2.30	0.225	0.00	57.5	−0.01	0.40
112	198	0.425	0.04	55.0	2.82	0.375	0.04	60.0	3.05	0.225	0.00	60.0	−0.18	0.23
113	199	0.425	0.04	57.5	2.54	0.375	0.02	60.0	2.93	0.200	0.00	52.5	−0.50	0.39
114	200	0.425	0.04	60.0	2.39	0.375	0.02	60.0	2.91	0.200	0.00	60.0	−0.82	0.53
115	201	0.425	0.04	60.0	1.97	0.300	0.02	17.5	3.72	0.425	0.02	0.0	1.21	1.75
		0.425	0.04	60.0	1.97	0.375	0.02	60.0	2.70	0.200	0.00	60.0	−1.29	0.73
		0.425	0.02	0.0	1.21	0.300	0.02	17.5	3.72	0.200	0.00	60.0	−1.29	2.51
116	202	0.400	0.02	0.0	1.11	0.300	0.00	25.0	4.05	0.100	0.00	30.0	−1.84	2.95
117	203	0.400	0.02	0.0	0.85	0.325	0.00	22.5	4.15	0.100	0.00	30.0	−2.51	3.30
118	204	0.400	0.02	0.0	0.77	0.300	0.00	22.5	4.33	0.100	0.00	60.0	−3.28	3.56
119	205	0.400	0.02	0.0	0.63	0.325	0.00	20.0	4.35	0.100	0.00	57.5	−4.07	3.72
120	206	0.425	0.04	0.0	0.82	0.325	0.00	20.0	4.50	0.100	0.00	60.0	−4.72	3.68
121	207	0.425	0.04	0.0	0.85	0.325	0.00	20.0	4.49	0.075	0.00	60.0	−5.67	3.64
122	208	0.425	0.04	0.0	1.08	0.325	0.00	20.0	4.54	0.050	0.00	60.0	−6.30	3.46
123	209	0.425	0.06	2.5	1.14	0.325	0.00	22.5	4.47	0.050	0.00	55.0	−7.20	3.32
124	210	0.425	0.06	0.0	1.29	0.350	0.00	22.5	4.46	0.000	0.00	0.0	−8.03	3.17
125	211	0.425	0.06	2.5	1.24	0.325	0.00	22.5	4.27	0.000	0.00	0.0	−9.04	3.03
126	212	0.425	0.06	2.5	1.37	0.325	0.00	22.5	4.18	0.000	0.00	0.0	−9.30	2.80
127	213	0.425	0.08	0.0	1.26	0.350	0.00	22.5	3.92	0.000	0.00	0.0	−8.22	2.66
128	214	0.425	0.08	0.0	1.25	0.350	0.00	27.5	3.78	0.000	0.00	0.0	−7.28	2.53
129	215	0.425	0.08	0.0	1.02	0.350	0.00	30.0	3.56	0.025	0.00	60.0	−5.95	2.54
130	216	0.425	0.08	0.0	1.02	0.350	0.00	30.0	3.58	0.000	0.00	0.0	−4.80	2.55
131	217	0.425	0.08	0.0	0.75	0.350	0.00	32.5	3.40	0.025	0.00	2.5	−3.61	2.65
132	218	0.425	0.10	0.0	0.76	0.350	0.00	27.5	3.38	0.075	−0.04	0.0	−2.60	2.62
133	219	0.425	0.10	0.0	0.50	0.300	−0.02	25.0	3.22	0.075	−0.06	2.5	−2.04	2.72
134	220	0.425	0.10	0.0	0.55	0.325	0.00	22.5	3.17	0.100	−0.06	0.0	−1.45	2.63
135	221	0.425	0.10	0.0	0.74	0.300	−0.02	22.5	2.83	0.100	−0.06	0.0	−1.14	2.09
136	222	0.425	0.10	0.0	1.09	0.325	0.00	17.5	2.74	0.125	−0.08	0.0	−0.60	1.65
137	223	0.425	0.08	0.0	1.36	0.300	0.00	15.0	2.44	0.125	−0.08	0.0	−0.63	1.08
138	224	0.375	0.06	0.0	1.67	0.325	0.02	10.0	2.52	0.125	−0.08	0.0	−0.25	0.84
139	225	0.375	0.06	0.0	1.73	0.300	0.00	10.0	2.39	0.150	−0.08	0.0	−0.37	0.66
140	226	0.375	0.06	0.0	2.14	0.325	0.02	7.5	2.54	0.150	−0.08	0.0	−0.08	0.40
154	240	0.425	0.02	50.0	3.91	0.375	0.02	50.0	4.11	0.225	0.00	10.0	0.20	0.20
155	241	0.425	0.02	50.0	3.79	0.375	0.02	50.0	4.09	0.225	0.02	12.5	0.09	0.31
160	246	0.325	−0.02	0.0	2.55	0.300	−0.02	0.0	2.81	0.200	0.04	15.0	0.02	0.26
$Z = 87$ (Fr)														
105	192	0.375	0.04	47.5	2.22	0.350	0.02	45.0	2.46	0.325	0.00	0.0	0.09	0.23

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 87$ (Fr)														
106	193	0.375	0.04	47.5	2.44	0.350	0.02	45.0	2.65	0.325	0.00	0.0	0.38	0.21
108	195	0.250	0.04	17.5	0.87	0.225	0.00	32.5	1.22	0.225	0.00	60.0	0.90	0.32
		0.250	0.04	17.5	0.87	0.275	0.02	10.0	1.08	0.325	0.02	0.0	0.87	0.21
		0.225	0.00	60.0	0.90	0.225	0.00	32.5	1.22	0.325	0.02	0.0	0.87	0.32
109	196	0.325	0.02	0.0	1.02	0.275	0.02	10.0	1.27	0.225	0.00	60.0	0.64	0.26
110	197	0.325	0.02	2.5	1.32	0.275	0.04	17.5	1.73	0.225	0.00	57.5	0.46	0.40
111	198	0.425	0.04	52.5	2.78	0.375	0.04	52.5	3.15	0.325	0.02	2.5	1.50	0.37
		0.425	0.04	52.5	2.78	0.375	0.04	52.5	3.15	0.225	0.00	55.0	0.19	0.37
		0.325	0.02	2.5	1.50	0.275	0.02	12.5	2.09	0.225	0.00	55.0	0.19	0.59
112	199	0.425	0.04	52.5	2.78	0.375	0.02	55.0	3.20	0.350	0.02	0.0	1.68	0.43
		0.425	0.04	52.5	2.78	0.375	0.02	55.0	3.20	0.225	0.00	55.0	0.05	0.43
		0.350	0.02	0.0	1.68	0.275	0.02	15.0	2.60	0.225	0.00	55.0	0.05	0.92
113	200	0.425	0.04	55.0	2.52	0.375	0.02	60.0	3.10	0.375	0.02	0.0	1.58	0.58
		0.425	0.04	55.0	2.52	0.375	0.02	60.0	3.10	0.225	0.00	60.0	−0.28	0.58
		0.375	0.02	0.0	1.58	0.300	0.02	20.0	2.86	0.225	0.00	60.0	−0.28	1.28
114	201	0.425	0.04	57.5	2.41	0.300	0.00	20.0	3.27	0.375	0.02	0.0	1.45	0.86
		0.425	0.04	57.5	2.41	0.375	0.02	60.0	3.08	0.225	0.02	55.0	−0.48	0.67
		0.375	0.02	0.0	1.45	0.300	0.00	20.0	3.27	0.225	0.02	55.0	−0.48	1.82
115	202	0.400	0.02	0.0	1.25	0.275	0.00	20.0	3.43	0.200	0.02	52.5	−0.95	2.19
116	203	0.400	0.02	0.0	1.07	0.300	0.00	17.5	3.70	0.200	0.02	60.0	−1.38	2.64
117	204	0.400	0.02	0.0	0.82	0.325	0.00	22.5	3.80	0.125	0.00	50.0	−1.98	2.98
118	205	0.400	0.02	0.0	0.73	0.325	0.00	22.5	4.01	0.125	0.00	60.0	−2.69	3.28
119	206	0.400	0.02	0.0	0.59	0.300	0.00	22.5	4.02	0.125	0.00	60.0	−3.41	3.43
120	207	0.400	0.02	0.0	0.80	0.300	0.00	22.5	4.11	0.100	0.00	60.0	−4.06	3.31
121	208	0.400	0.02	0.0	0.91	0.325	0.00	20.0	4.11	0.100	0.00	60.0	−4.87	3.21
122	209	0.400	0.04	0.0	1.17	0.350	0.00	22.5	4.18	0.075	0.02	60.0	−5.43	3.01
123	210	0.400	0.04	5.0	1.19	0.350	0.00	22.5	4.09	0.075	0.02	55.0	−6.27	2.90
124	211	0.425	0.06	5.0	1.36	0.325	0.00	20.0	4.05	0.025	0.00	55.0	−6.96	2.70
125	212	0.425	0.06	5.0	1.29	0.350	0.00	22.5	3.87	0.000	0.00	0.0	−7.94	2.57
126	213	0.400	0.06	0.0	1.41	0.350	0.00	22.5	3.76	0.000	0.00	0.0	−8.19	2.34
127	214	0.425	0.08	0.0	1.22	0.325	0.00	25.0	3.59	0.025	0.00	55.0	−7.15	2.37
128	215	0.425	0.08	0.0	1.22	0.350	0.00	27.5	3.45	0.000	0.00	0.0	−6.20	2.23
129	216	0.425	0.08	0.0	0.99	0.350	0.00	30.0	3.25	0.025	0.00	57.5	−4.93	2.26
130	217	0.400	0.08	0.0	1.03	0.325	−0.02	30.0	3.27	0.000	0.00	0.0	−3.73	2.24
131	218	0.400	0.08	0.0	0.69	0.325	−0.02	30.0	3.08	0.075	−0.06	0.0	−2.77	2.39
132	219	0.425	0.10	0.0	0.58	0.325	−0.02	30.0	3.06	0.075	−0.06	0.0	−1.99	2.48
133	220	0.425	0.10	0.0	0.33	0.325	0.00	25.0	2.93	0.100	−0.06	0.0	−1.59	2.60
134	221	0.425	0.10	0.0	0.38	0.325	0.00	22.5	2.84	0.100	−0.06	0.0	−1.07	2.47
135	222	0.425	0.10	0.0	0.58	0.300	−0.02	20.0	2.50	0.125	−0.08	0.0	−0.93	1.91
136	223	0.425	0.10	0.0	0.92	0.300	−0.02	20.0	2.37	0.125	−0.08	0.0	−0.62	1.44
137	224	0.375	0.06	0.0	1.08	0.325	0.00	15.0	2.08	0.125	−0.08	0.0	−0.63	1.00
138	225	0.375	0.06	0.0	1.42	0.325	0.02	12.5	2.17	0.150	−0.08	0.0	−0.43	0.75
139	226	0.375	0.06	0.0	1.48	0.325	0.02	10.0	1.99	0.150	−0.08	0.0	−0.58	0.52
140	227	0.375	0.06	0.0	1.89	0.325	0.02	7.5	2.16	0.150	−0.08	0.0	−0.31	0.27
151	238	0.425	0.04	50.0	3.63	0.400	0.02	47.5	3.84	0.225	0.00	0.0	−0.49	0.21
152	239	0.425	0.02	50.0	3.82	0.400	0.02	47.5	4.05	0.225	0.00	0.0	−0.28	0.23
153	240	0.425	0.02	50.0	3.70	0.375	0.02	47.5	4.06	0.225	0.00	5.0	−0.32	0.36
154	241	0.425	0.02	50.0	3.82	0.375	0.02	47.5	4.22	0.225	0.00	10.0	0.04	0.40
160	247	0.325	−0.02	0.0	2.27	0.275	0.00	−2.5	2.49	0.200	0.04	15.0	0.05	0.22
$Z = 88$ (Ra)														
110	198	0.325	0.02	0.0	1.26	0.275	0.04	17.5	1.58	0.250	0.00	47.5	0.89	0.31

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 88$ (Ra)														
111	199	0.425	0.04	52.5	3.10	0.375	0.04	52.5	3.45	0.325	0.02	5.0	1.44	0.35
		0.425	0.04	52.5	3.10	0.375	0.04	52.5	3.45	0.225	0.00	45.0	0.64	0.35
		0.325	0.02	5.0	1.44	0.275	0.02	15.0	1.91	0.225	0.00	45.0	0.64	0.47
112	200	0.425	0.04	52.5	3.10	0.375	0.02	52.5	3.55	0.350	0.02	0.0	1.67	0.45
		0.425	0.04	52.5	3.10	0.375	0.02	52.5	3.55	0.225	0.00	47.5	0.49	0.45
		0.350	0.02	0.0	1.67	0.275	0.02	15.0	2.42	0.225	0.00	47.5	0.49	0.75
113	201	0.425	0.04	55.0	2.87	0.375	0.02	55.0	3.48	0.350	0.02	0.0	1.67	0.61
		0.425	0.04	55.0	2.87	0.375	0.02	55.0	3.48	0.225	0.02	45.0	0.15	0.61
		0.350	0.02	0.0	1.67	0.300	0.02	20.0	2.69	0.225	0.02	45.0	0.15	1.02
114	202	0.375	0.02	0.0	1.60	0.300	0.02	20.0	3.12	0.225	0.02	47.5	−0.04	1.51
115	203	0.375	0.02	0.0	1.42	0.275	0.00	20.0	3.27	0.200	0.02	45.0	−0.49	1.85
116	204	0.375	0.02	0.0	1.22	0.300	0.00	17.5	3.54	0.200	0.02	50.0	−0.84	2.31
117	205	0.400	0.02	0.0	1.05	0.325	0.00	22.5	3.63	0.200	0.02	52.5	−1.42	2.57
118	206	0.400	0.02	0.0	0.96	0.325	0.00	22.5	3.84	0.125	0.00	60.0	−1.99	2.87
119	207	0.400	0.02	0.0	0.82	0.300	0.00	22.5	3.87	0.125	0.00	60.0	−2.69	3.04
120	208	0.400	0.02	0.0	1.03	0.300	0.00	22.5	3.96	0.125	0.00	60.0	−3.24	2.93
121	209	0.400	0.02	5.0	1.13	0.325	0.00	20.0	3.95	0.100	0.00	60.0	−4.05	2.83
122	210	0.400	0.04	5.0	1.35	0.325	0.00	25.0	3.98	0.075	0.00	60.0	−4.53	2.63
123	211	0.400	0.04	7.5	1.35	0.325	0.00	20.0	3.93	0.075	0.02	55.0	−5.34	2.58
124	212	0.400	0.04	7.5	1.57	0.325	0.00	20.0	3.89	0.025	0.00	55.0	−5.95	2.32
125	213	0.425	0.06	10.0	1.51	0.350	0.00	22.5	3.70	0.000	0.00	0.0	−6.93	2.19
126	214	0.400	0.06	2.5	1.63	0.350	0.00	22.5	3.59	0.000	0.00	0.0	−7.18	1.96
127	215	0.425	0.08	2.5	1.45	0.325	0.00	25.0	3.42	0.025	0.00	57.5	−6.12	1.97
128	216	0.400	0.06	0.0	1.46	0.350	0.00	27.5	3.28	0.000	0.00	0.0	−5.20	1.83
129	217	0.400	0.08	0.0	1.24	0.350	0.00	30.0	3.09	0.025	0.00	55.0	−3.90	1.85
130	218	0.400	0.08	0.0	1.18	0.350	0.00	30.0	3.13	0.000	0.00	0.0	−2.73	1.95
131	219	0.425	0.10	0.0	0.80	0.350	0.00	30.0	2.95	0.075	−0.04	0.0	−1.89	2.15
132	220	0.425	0.10	0.0	0.71	0.325	−0.02	30.0	2.95	0.100	−0.06	0.0	−1.24	2.24
133	221	0.425	0.10	0.0	0.45	0.350	0.00	27.5	2.73	0.100	−0.06	0.0	−0.95	2.28
134	222	0.425	0.10	0.0	0.50	0.300	−0.02	25.0	2.66	0.125	−0.08	0.0	−0.48	2.16
135	223	0.425	0.10	0.0	0.70	0.275	−0.02	17.5	2.34	0.125	−0.08	0.0	−0.57	1.64
136	224	0.425	0.10	0.0	1.05	0.300	−0.02	20.0	2.23	0.150	−0.08	0.0	−0.34	1.19
137	225	0.375	0.06	0.0	1.14	0.325	0.02	15.0	1.92	0.150	−0.08	0.0	−0.57	0.78
138	226	0.375	0.06	0.0	1.49	0.325	0.02	10.0	2.02	0.150	−0.08	0.0	−0.38	0.52
139	227	0.375	0.06	0.0	1.54	0.325	0.02	12.5	1.91	0.150	−0.08	0.0	−0.54	0.36
152	240	0.425	0.02	50.0	4.09	0.375	0.02	47.5	4.31	0.225	0.00	0.0	−0.39	0.22
153	241	0.425	0.02	50.0	3.97	0.400	0.02	50.0	4.31	0.225	0.00	0.0	−0.44	0.35
$Z = 89$ (Ac)														
110	199	0.325	0.02	0.0	1.06	0.275	0.02	12.5	1.28	0.250	0.00	45.0	0.94	0.22
111	200	0.325	0.02	10.0	1.19	0.275	0.02	15.0	1.57	0.250	0.00	47.5	0.72	0.38
112	201	0.350	0.04	10.0	1.47	0.275	0.00	15.0	2.06	0.225	0.00	42.5	0.63	0.59
113	202	0.350	0.02	12.5	1.46	0.275	0.02	22.5	2.34	0.225	0.02	42.5	0.27	0.88
114	203	0.375	0.02	0.0	1.50	0.275	0.02	22.5	2.72	0.225	0.02	42.5	0.10	1.22
115	204	0.375	0.02	0.0	1.32	0.275	0.00	20.0	2.89	0.225	0.04	45.0	−0.24	1.57
116	205	0.375	0.02	0.0	1.12	0.275	0.00	20.0	3.15	0.200	0.02	45.0	−0.53	2.04
117	206	0.375	0.02	0.0	0.94	0.300	0.00	25.0	3.23	0.200	0.04	52.5	−1.10	2.29
118	207	0.375	0.02	0.0	0.84	0.325	0.00	22.5	3.41	0.200	0.04	60.0	−1.58	2.57
119	208	0.400	0.02	0.0	0.82	0.325	0.00	25.0	3.47	0.150	0.00	60.0	−2.18	2.65
120	209	0.375	0.02	5.0	1.00	0.325	0.00	25.0	3.56	0.125	0.00	60.0	−2.72	2.56
121	210	0.400	0.04	10.0	1.03	0.325	0.00	25.0	3.52	0.100	0.00	60.0	−3.41	2.49

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 89$ (Ac)														
122	211	0.400	0.04	7.5	1.21	0.325	0.00	20.0	3.57	0.075	0.00	60.0	−3.78	2.36
123	212	0.400	0.04	10.0	1.18	0.350	0.02	22.5	3.46	0.075	0.00	57.5	−4.55	2.28
124	213	0.400	0.04	10.0	1.38	0.350	0.02	22.5	3.42	0.050	0.02	60.0	−5.10	2.04
125	214	0.400	0.04	10.0	1.35	0.350	0.02	22.5	3.25	0.250	0.02	60.0	−1.23	1.90
		0.400	0.04	10.0	1.35	0.350	0.02	22.5	3.25	0.000	0.00	0.0	−5.98	1.90
		0.250	0.02	60.0	−1.23	0.200	0.02	60.0	−0.94	0.000	0.00	0.0	−5.98	0.29
126	215	0.400	0.06	7.5	1.49	0.325	0.00	25.0	3.18	0.250	0.00	60.0	−0.84	1.69
		0.400	0.06	7.5	1.49	0.325	0.00	25.0	3.18	0.000	0.00	0.0	−6.22	1.69
		0.250	0.00	60.0	−0.84	0.200	0.02	60.0	−0.48	0.000	0.00	0.0	−6.22	0.36
127	216	0.400	0.06	2.5	1.34	0.350	0.00	25.0	2.97	0.025	0.00	60.0	−5.18	1.63
128	217	0.400	0.08	0.0	1.34	0.325	0.00	30.0	2.89	0.000	0.00	0.0	−4.26	1.55
129	218	0.400	0.08	0.0	1.03	0.350	0.00	30.0	2.68	0.025	0.00	52.5	−2.99	1.65
130	219	0.400	0.08	0.0	0.95	0.350	0.00	30.0	2.71	0.000	0.00	0.0	−1.82	1.76
131	220	0.425	0.10	0.0	0.60	0.350	0.00	30.0	2.56	0.100	−0.06	0.0	−1.42	1.96
132	221	0.425	0.10	0.0	0.51	0.325	−0.02	30.0	2.55	0.100	−0.06	0.0	−0.89	2.04
133	222	0.425	0.10	0.0	0.27	0.325	−0.02	30.0	2.34	0.125	−0.08	0.0	−0.69	2.08
134	223	0.425	0.12	0.0	0.32	0.275	−0.04	17.5	2.27	0.125	−0.08	0.0	−0.51	1.95
135	224	0.425	0.12	0.0	0.39	0.275	−0.04	17.5	1.93	0.150	−0.08	0.0	−0.65	1.54
136	225	0.425	0.12	0.0	0.78	0.325	0.00	17.5	1.83	0.150	−0.08	0.0	−0.61	1.05
137	226	0.375	0.06	0.0	0.90	0.300	0.00	15.0	1.55	0.150	−0.08	0.0	−0.83	0.64
138	227	0.375	0.06	0.0	1.24	0.325	0.02	15.0	1.69	0.150	−0.08	0.0	−0.65	0.45
139	228	0.375	0.06	0.0	1.32	0.325	0.02	12.5	1.56	0.175	−0.08	0.0	−0.88	0.25
$Z = 90$ (Th)														
111	201	0.325	0.02	12.5	1.07	0.275	0.02	15.0	1.34	0.225	0.02	27.5	0.91	0.26
112	202	0.325	0.02	12.5	1.37	0.275	0.00	15.0	1.83	0.225	0.02	35.0	0.93	0.46
113	203	0.350	0.02	15.0	1.43	0.275	0.02	22.5	2.13	0.225	0.02	37.5	0.55	0.70
114	204	0.375	0.04	15.0	1.59	0.275	0.02	22.5	2.51	0.225	0.02	40.0	0.41	0.92
115	205	0.375	0.02	12.5	1.44	0.275	0.00	20.0	2.68	0.225	0.04	42.5	0.06	1.24
116	206	0.375	0.02	2.5	1.31	0.300	0.00	17.5	2.91	0.225	0.04	45.0	−0.08	1.60
117	207	0.375	0.02	7.5	1.13	0.300	0.00	25.0	3.01	0.200	0.04	50.0	−0.63	1.88
118	208	0.375	0.02	0.0	1.04	0.325	0.00	22.5	3.19	0.150	0.00	60.0	−1.04	2.16
119	209	0.400	0.02	7.5	1.00	0.300	0.00	22.5	3.24	0.150	0.00	60.0	−1.69	2.24
120	210	0.400	0.02	7.5	1.17	0.325	0.00	25.0	3.36	0.125	0.00	60.0	−2.17	2.19
121	211	0.400	0.04	10.0	1.11	0.325	0.00	25.0	3.32	0.100	0.00	60.0	−2.75	2.20
122	212	0.400	0.04	10.0	1.32	0.350	0.02	22.5	3.34	0.100	0.00	60.0	−3.11	2.03
123	213	0.400	0.04	10.0	1.27	0.350	0.02	22.5	3.27	0.075	0.02	55.0	−3.86	1.99
124	214	0.400	0.04	10.0	1.48	0.350	0.02	22.5	3.23	0.050	0.02	60.0	−4.34	1.75
125	215	0.400	0.06	10.0	1.46	0.350	0.02	22.5	3.06	0.250	0.02	60.0	−0.82	1.61
		0.400	0.06	10.0	1.46	0.350	0.02	22.5	3.06	0.000	0.00	0.0	−5.19	1.61
		0.250	0.02	60.0	−0.82	0.200	0.02	60.0	−0.42	0.000	0.00	0.0	−5.19	0.40
126	216	0.400	0.06	10.0	1.55	0.350	0.02	22.5	2.96	0.250	0.02	60.0	−0.43	1.41
		0.400	0.06	10.0	1.55	0.350	0.02	22.5	2.96	0.000	0.00	0.0	−5.42	1.41
		0.250	0.02	60.0	−0.43	0.200	0.02	60.0	0.04	0.000	0.00	0.0	−5.42	0.47
127	217	0.400	0.06	10.0	1.43	0.325	0.00	25.0	2.77	0.025	0.00	55.0	−4.38	1.34
128	218	0.400	0.08	0.0	1.43	0.350	0.00	30.0	2.67	0.000	0.00	0.0	−3.46	1.23
129	219	0.400	0.08	0.0	1.12	0.325	0.00	32.5	2.55	0.025	0.00	57.5	−2.20	1.43
130	220	0.400	0.08	0.0	1.05	0.325	0.00	32.5	2.55	0.000	0.00	0.0	−1.03	1.50
131	221	0.400	0.08	0.0	0.71	0.325	−0.02	32.5	2.38	0.100	−0.06	0.0	−0.83	1.67
132	222	0.425	0.10	0.0	0.68	0.325	0.00	27.5	2.36	0.100	−0.06	0.0	−0.31	1.69
133	223	0.400	0.10	0.0	0.44	0.325	0.00	27.5	2.16	0.125	−0.08	0.0	−0.37	1.73

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 90$ (Th)														
134	224	0.425	0.12	0.0	0.39	0.300	−0.02	25.0	2.10	0.150	−0.08	0.0	−0.22	1.70
135	225	0.425	0.12	0.0	0.47	0.275	−0.02	17.5	1.75	0.150	−0.08	0.0	−0.58	1.28
136	226	0.425	0.12	0.0	0.84	0.300	0.00	17.5	1.68	0.150	−0.10	0.0	−0.55	0.85
137	227	0.400	0.10	0.0	1.01	0.325	0.02	12.5	1.41	0.150	−0.10	0.0	−0.79	0.40
138	228	0.375	0.06	0.0	1.33	0.350	0.04	12.5	1.58	0.175	−0.08	0.0	−0.73	0.25
$Z = 91$ (Pa)														
112	203	0.325	0.02	15.0	0.97	0.275	0.00	17.5	1.37	0.225	0.02	30.0	0.82	0.40
113	204	0.350	0.02	17.5	1.11	0.275	0.00	17.5	1.64	0.225	0.02	35.0	0.53	0.53
114	205	0.375	0.04	15.0	1.26	0.275	0.00	22.5	2.03	0.225	0.02	37.5	0.43	0.77
115	206	0.375	0.04	15.0	1.14	0.300	0.00	20.0	2.14	0.225	0.04	40.0	0.07	1.01
116	207	0.375	0.04	12.5	1.12	0.275	0.00	20.0	2.45	0.225	0.04	42.5	−0.02	1.32
117	208	0.375	0.02	10.0	0.99	0.300	0.00	25.0	2.52	0.200	0.04	47.5	−0.41	1.53
118	209	0.375	0.02	7.5	0.96	0.325	0.00	22.5	2.70	0.200	0.04	60.0	−0.77	1.74
119	210	0.400	0.04	12.5	0.88	0.325	0.00	20.0	2.73	0.150	0.00	60.0	−1.32	1.84
120	211	0.400	0.04	10.0	0.95	0.325	0.00	20.0	2.87	0.125	0.00	60.0	−1.72	1.92
121	212	0.400	0.04	10.0	0.90	0.325	0.00	25.0	2.84	0.125	0.00	60.0	−2.25	1.94
122	213	0.400	0.04	10.0	1.09	0.350	0.02	22.5	2.87	0.100	0.00	60.0	−2.55	1.77
123	214	0.400	0.04	12.5	1.04	0.350	0.02	22.5	2.80	0.075	0.02	55.0	−3.22	1.76
124	215	0.400	0.06	10.0	1.25	0.350	0.02	22.5	2.76	0.250	0.02	60.0	−0.56	1.51
		0.400	0.06	10.0	1.25	0.350	0.02	22.5	2.76	0.075	0.02	60.0	−3.61	1.51
		0.250	0.02	60.0	−0.56	0.200	0.02	60.0	−0.33	0.075	0.02	60.0	−3.61	0.23
125	216	0.400	0.06	12.5	1.12	0.350	0.02	22.5	2.59	0.250	0.02	60.0	−0.67	1.47
		0.400	0.06	12.5	1.12	0.350	0.02	22.5	2.59	0.000	0.00	0.0	−4.39	1.47
		0.250	0.02	60.0	−0.67	0.200	0.02	60.0	−0.11	0.000	0.00	0.0	−4.39	0.55
126	217	0.400	0.06	12.5	1.22	0.350	0.02	22.5	2.48	0.250	0.02	60.0	−0.29	1.27
		0.400	0.06	12.5	1.22	0.350	0.02	22.5	2.48	0.000	0.00	0.0	−4.61	1.27
		0.250	0.02	60.0	−0.29	0.200	0.02	60.0	0.34	0.000	0.00	0.0	−4.61	0.63
127	218	0.400	0.06	12.5	1.11	0.325	0.00	27.5	2.30	0.250	0.02	60.0	0.13	1.19
		0.400	0.06	12.5	1.11	0.325	0.00	27.5	2.30	0.025	0.00	57.5	−3.58	1.19
		0.250	0.02	60.0	0.13	0.200	0.00	60.0	0.50	0.025	0.00	57.5	−3.58	0.38
128	219	0.400	0.08	0.0	1.15	0.325	0.00	32.5	2.26	0.250	0.02	60.0	0.65	1.11
		0.400	0.08	0.0	1.15	0.325	0.00	32.5	2.26	0.000	0.00	0.0	−2.67	1.11
		0.250	0.02	60.0	0.65	0.200	0.00	60.0	0.96	0.000	0.00	0.0	−2.67	0.31
129	220	0.400	0.08	0.0	0.86	0.325	0.00	32.5	2.14	0.025	0.00	60.0	−1.42	1.28
130	221	0.275	−0.02	40.0	1.45	0.300	−0.02	30.0	2.13	0.400	0.08	0.0	0.77	0.68
		0.275	−0.02	40.0	1.45	0.200	−0.02	40.0	1.69	0.100	−0.06	0.0	−0.61	0.24
		0.400	0.08	0.0	0.77	0.300	−0.02	30.0	2.13	0.100	−0.06	0.0	−0.61	1.36
131	222	0.275	−0.02	37.5	1.51	0.300	−0.02	30.0	1.97	0.400	0.08	0.0	0.45	0.45
		0.275	−0.02	37.5	1.51	0.225	−0.04	32.5	1.74	0.100	−0.06	0.0	−0.50	0.22
		0.400	0.08	0.0	0.45	0.300	−0.02	30.0	1.97	0.100	−0.06	0.0	−0.50	1.51
132	223	0.400	0.10	0.0	0.39	0.325	0.00	27.5	1.92	0.125	−0.08	0.0	−0.20	1.53
133	224	0.400	0.10	0.0	0.10	0.300	−0.02	27.5	1.70	0.125	−0.08	0.0	−0.38	1.60
134	225	0.400	0.10	0.0	0.11	0.300	−0.02	22.5	1.60	0.150	−0.08	0.0	−0.48	1.49
135	226	0.400	0.10	0.0	0.19	0.300	−0.02	22.5	1.29	0.150	−0.10	0.0	−0.84	1.10
136	227	0.400	0.10	0.0	0.51	0.325	0.02	15.0	1.18	0.150	−0.10	0.0	−0.86	0.67
137	228	0.375	0.08	0.0	0.60	0.350	0.04	12.5	1.00	0.175	−0.08	0.0	−1.14	0.41
138	229	0.375	0.08	0.0	0.95	0.325	0.02	12.5	1.22	0.175	−0.08	0.0	−1.12	0.27
139	230	0.350	0.06	0.0	0.85	0.350	0.04	7.5	1.17	0.175	−0.08	0.0	−1.42	0.32
140	231	0.350	0.06	0.0	1.21	0.350	0.06	12.5	1.42	0.175	−0.08	0.0	−1.32	0.21
$Z = 92$ (U)														
111	203	0.425	−0.02	0.0	1.88	0.400	0.00	0.0	2.20	0.300	0.02	15.0	0.48	0.31

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 92$ (U)														
112	204	0.250	0.04	30.0	0.85	0.275	0.02	17.5	1.10	0.325	0.02	17.5	0.84	0.25
113	205	0.350	0.04	15.0	1.01	0.275	0.02	20.0	1.40	0.225	0.02	30.0	0.60	0.39
114	206	0.375	0.04	17.5	1.26	0.275	0.02	22.5	1.79	0.225	0.04	37.5	0.56	0.53
115	207	0.375	0.04	15.0	1.14	0.300	0.00	20.0	1.92	0.225	0.04	37.5	0.23	0.78
116	208	0.375	0.04	12.5	1.15	0.300	0.00	22.5	2.24	0.225	0.04	40.0	0.19	1.09
117	209	0.375	0.04	12.5	1.03	0.325	0.00	22.5	2.27	0.150	0.00	30.0	−0.06	1.24
118	210	0.400	0.04	12.5	1.04	0.300	0.00	22.5	2.47	0.125	0.02	0.0	−0.22	1.43
		0.400	0.04	12.5	1.04	0.300	0.00	22.5	2.47	0.200	0.04	57.5	−0.38	1.43
		0.125	0.02	0.0	−0.22	0.150	0.00	22.5	0.03	0.200	0.04	57.5	−0.38	0.25
119	211	0.400	0.02	5.0	0.93	0.325	0.00	25.0	2.53	0.175	0.02	60.0	−0.93	1.59
120	212	0.400	0.04	10.0	0.99	0.350	0.02	22.5	2.64	0.150	0.02	60.0	−1.35	1.65
121	213	0.400	0.04	12.5	0.92	0.325	0.00	22.5	2.67	0.125	0.00	60.0	−1.81	1.75
122	214	0.400	0.04	12.5	1.12	0.325	0.00	22.5	2.71	0.100	0.02	60.0	−2.07	1.60
123	215	0.400	0.04	12.5	1.07	0.325	0.00	22.5	2.62	0.075	0.02	52.5	−2.70	1.55
124	216	0.400	0.06	12.5	1.23	0.350	0.02	20.0	2.56	0.250	0.04	60.0	−0.19	1.33
		0.400	0.06	12.5	1.23	0.350	0.02	20.0	2.56	0.075	0.02	60.0	−3.08	1.33
		0.250	0.04	60.0	−0.19	0.200	0.02	60.0	0.10	0.075	0.02	60.0	−3.08	0.29
125	217	0.400	0.06	12.5	1.11	0.350	0.02	20.0	2.44	0.250	0.02	60.0	−0.30	1.33
		0.400	0.06	12.5	1.11	0.350	0.02	20.0	2.44	0.000	0.00	0.0	−3.81	1.33
		0.250	0.02	60.0	−0.30	0.200	0.02	62.5	0.32	0.000	0.00	0.0	−3.81	0.61
126	218	0.400	0.06	12.5	1.21	0.375	0.04	22.5	2.35	0.250	0.02	60.0	0.08	1.13
		0.400	0.06	12.5	1.21	0.375	0.04	22.5	2.35	0.000	0.00	0.0	−4.03	1.13
		0.250	0.02	60.0	0.08	0.200	0.02	60.0	0.77	0.000	0.00	0.0	−4.03	0.69
127	219	0.400	0.06	12.5	1.10	0.375	0.04	22.5	2.13	0.250	0.02	60.0	0.49	1.03
		0.400	0.06	12.5	1.10	0.375	0.04	22.5	2.13	0.025	0.00	60.0	−2.99	1.03
		0.250	0.02	60.0	0.49	0.200	0.02	60.0	0.94	0.025	0.00	60.0	−2.99	0.45
128	220	0.400	0.08	0.0	1.23	0.325	0.00	30.0	2.05	0.275	0.02	55.0	1.01	0.82
		0.400	0.08	0.0	1.23	0.325	0.00	30.0	2.05	0.000	0.00	0.0	−2.10	0.82
		0.275	0.02	55.0	1.01	0.200	0.00	60.0	1.40	0.000	0.00	0.0	−2.10	0.39
129	221	0.275	0.00	47.5	1.30	0.325	0.00	30.0	1.94	0.400	0.08	0.0	0.93	0.64
		0.275	0.00	47.5	1.30	0.225	0.00	50.0	1.59	0.025	0.00	60.0	−0.84	0.29
		0.400	0.08	0.0	0.93	0.325	0.00	30.0	1.94	0.025	0.00	60.0	−0.84	1.02
130	222	0.275	−0.02	40.0	1.58	0.325	0.00	30.0	1.93	0.400	0.08	0.0	0.86	0.35
		0.275	−0.02	40.0	1.58	0.225	−0.04	32.5	1.94	0.100	−0.06	0.0	−0.13	0.37
		0.400	0.08	0.0	0.86	0.225	−0.04	32.5	1.94	0.100	−0.06	0.0	−0.13	1.09
131	223	0.350	0.02	25.0	1.31	0.375	0.04	17.5	1.54	0.400	0.08	0.0	0.53	0.23
		0.350	0.02	25.0	1.31	0.225	−0.04	32.5	1.94	0.100	−0.06	0.0	−0.02	0.63
		0.400	0.08	0.0	0.53	0.225	−0.04	32.5	1.94	0.100	−0.06	0.0	−0.02	1.41
132	224	0.375	0.04	25.0	1.34	0.375	0.06	15.0	1.64	0.400	0.10	0.0	0.45	0.29
		0.375	0.04	25.0	1.34	0.225	−0.06	20.0	1.90	0.125	−0.08	0.0	0.14	0.56
		0.400	0.10	0.0	0.45	0.225	−0.06	20.0	1.90	0.125	−0.08	0.0	0.14	1.46
133	225	0.375	0.04	25.0	1.17	0.350	0.04	12.5	1.40	0.400	0.10	0.0	0.16	0.23
		0.375	0.04	25.0	1.17	0.275	−0.04	22.5	1.60	0.150	−0.08	0.0	−0.18	0.42
		0.400	0.10	0.0	0.16	0.275	−0.04	22.5	1.60	0.150	−0.08	0.0	−0.18	1.44
134	226	0.400	0.10	0.0	0.18	0.300	−0.02	25.0	1.39	0.150	−0.08	0.0	−0.35	1.21
135	227	0.400	0.10	0.0	0.26	0.300	0.00	17.5	1.08	0.150	−0.10	0.0	−0.70	0.83
136	228	0.400	0.10	0.0	0.59	0.350	0.04	10.0	1.11	0.175	−0.08	0.0	−0.87	0.52
137	229	0.375	0.08	0.0	0.59	0.325	0.02	12.5	0.96	0.175	−0.08	0.0	−1.24	0.37
138	230	0.375	0.08	0.0	0.96	0.350	0.04	10.0	1.17	0.175	−0.08	0.0	−1.24	0.21
139	231	0.350	0.06	0.0	0.84	0.325	0.04	10.0	1.16	0.175	−0.08	0.0	−1.55	0.32

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 93$ (Np)														
113	206	0.350	0.04	17.5	0.54	0.275	0.00	17.5	0.90	0.250	0.04	35.0	0.45	0.35
114	207	0.350	0.04	15.0	0.77	0.300	0.02	22.5	1.22	0.250	0.04	37.5	0.48	0.45
115	208	0.375	0.04	17.5	0.82	0.275	0.00	22.5	1.43	0.225	0.04	37.5	0.17	0.61
116	209	0.375	0.04	15.0	0.85	0.300	0.00	20.0	1.67	0.225	0.04	40.0	0.17	0.82
117	210	0.375	0.04	12.5	0.74	0.300	0.00	25.0	1.74	0.150	0.00	7.5	−0.07	1.00
118	211	0.375	0.04	12.5	0.81	0.325	0.00	20.0	1.92	0.150	0.02	0.0	−0.14	1.11
119	212	0.400	0.04	10.0	0.65	0.325	0.00	22.5	2.05	0.125	0.02	0.0	−0.54	1.39
		0.400	0.04	10.0	0.65	0.325	0.00	22.5	2.05	0.175	0.02	57.5	−0.66	1.39
		0.125	0.02	0.0	−0.54	0.125	0.02	25.0	−0.31	0.175	0.02	57.5	−0.66	0.23
120	213	0.400	0.04	10.0	0.73	0.325	0.00	22.5	2.17	0.150	0.02	60.0	−1.07	1.44
121	214	0.400	0.04	12.5	0.65	0.325	0.00	22.5	2.15	0.125	0.02	57.5	−1.46	1.50
122	215	0.400	0.04	12.5	0.84	0.325	0.00	22.5	2.19	0.100	0.02	60.0	−1.65	1.35
123	216	0.400	0.04	12.5	0.80	0.350	0.02	20.0	2.13	0.100	0.02	57.5	−2.26	1.33
124	217	0.400	0.06	12.5	0.92	0.350	0.02	20.0	2.14	0.250	0.04	60.0	−0.09	1.22
		0.400	0.06	12.5	0.92	0.350	0.02	20.0	2.14	0.075	0.02	60.0	−2.54	1.22
		0.250	0.04	60.0	−0.09	0.200	0.02	60.0	0.39	0.075	0.02	60.0	−2.54	0.48
125	218	0.400	0.06	12.5	0.80	0.350	0.02	20.0	2.02	0.250	0.02	60.0	−0.18	1.22
		0.400	0.06	12.5	0.80	0.350	0.02	20.0	2.02	0.025	0.00	55.0	−3.05	1.22
		0.250	0.02	60.0	−0.18	0.200	0.02	52.5	0.64	0.025	0.00	55.0	−3.05	0.82
126	219	0.400	0.06	12.5	0.89	0.350	0.02	22.5	1.92	0.250	0.02	60.0	0.19	1.03
		0.400	0.06	12.5	0.89	0.350	0.02	22.5	1.92	0.025	0.00	60.0	−3.15	1.03
		0.250	0.02	60.0	0.19	0.200	0.02	52.5	1.10	0.025	0.00	60.0	−3.15	0.91
127	220	0.400	0.06	12.5	0.80	0.350	0.02	22.5	1.73	0.275	0.02	55.0	0.54	0.93
		0.400	0.06	12.5	0.80	0.350	0.02	22.5	1.73	0.025	0.00	60.0	−2.27	0.93
		0.275	0.02	55.0	0.54	0.200	0.00	52.5	1.18	0.025	0.00	60.0	−2.27	0.65
128	221	0.275	0.00	50.0	1.01	0.300	−0.02	32.5	1.61	0.400	0.06	12.5	0.96	0.60
		0.275	0.00	50.0	1.01	0.200	0.00	50.0	1.62	0.025	0.00	55.0	−1.29	0.61
		0.400	0.06	12.5	0.96	0.200	0.00	50.0	1.62	0.025	0.00	55.0	−1.29	0.66
129	222	0.275	−0.02	40.0	1.17	0.300	−0.02	32.5	1.49	0.400	0.08	0.0	0.70	0.32
		0.275	−0.02	40.0	1.17	0.225	−0.04	32.5	1.63	0.075	−0.04	0.0	−0.29	0.45
		0.400	0.08	0.0	0.70	0.225	−0.04	32.5	1.63	0.075	−0.04	0.0	−0.29	0.93
130	223	0.350	0.02	25.0	1.11	0.400	0.06	20.0	1.33	0.400	0.08	0.0	0.62	0.22
		0.350	0.02	25.0	1.11	0.275	−0.02	10.0	1.77	0.100	−0.06	0.0	0.16	0.66
		0.400	0.08	0.0	0.62	0.275	−0.02	10.0	1.77	0.100	−0.06	0.0	0.16	1.16
131	224	0.350	0.02	25.0	0.87	0.400	0.06	17.5	1.24	0.400	0.08	0.0	0.30	0.37
		0.350	0.02	25.0	0.87	0.275	−0.02	10.0	1.54	0.125	−0.06	0.0	0.13	0.67
		0.400	0.08	0.0	0.30	0.275	−0.02	10.0	1.54	0.125	−0.06	0.0	0.13	1.24
132	225	0.375	0.04	25.0	0.92	0.350	0.04	17.5	1.22	0.400	0.10	0.0	0.16	0.29
		0.375	0.04	25.0	0.92	0.275	−0.02	15.0	1.44	0.150	−0.08	0.0	0.05	0.51
		0.400	0.10	0.0	0.16	0.275	−0.02	15.0	1.44	0.150	−0.08	0.0	0.05	1.28
133	226	0.375	0.04	25.0	0.76	0.350	0.04	15.0	1.00	0.400	0.10	0.0	−0.12	0.23
		0.375	0.04	25.0	0.76	0.250	−0.04	15.0	1.14	0.175	−0.08	0.0	−0.32	0.38
		0.400	0.10	0.0	−0.12	0.250	−0.04	15.0	1.14	0.175	−0.08	0.0	−0.32	1.26
134	227	0.400	0.10	0.0	−0.10	0.350	0.04	12.5	0.94	0.175	−0.08	0.0	−0.58	1.04
135	228	0.400	0.10	0.0	−0.01	0.375	0.06	10.0	0.77	0.175	−0.08	0.0	−0.98	0.78
136	229	0.400	0.10	0.0	0.31	0.350	0.04	10.0	0.77	0.175	−0.08	0.0	−1.17	0.45
137	230	0.375	0.08	0.0	0.29	0.350	0.04	10.0	0.59	0.175	−0.08	0.0	−1.53	0.29
138	231	0.350	0.06	0.0	0.55	0.325	0.04	10.0	0.85	0.175	−0.08	0.0	−1.54	0.30
139	232	0.350	0.06	0.0	0.50	0.325	0.04	7.5	0.75	0.175	−0.08	0.0	−1.86	0.25
$Z = 94$ (Pu)														
115	209	0.350	0.04	15.0	0.77	0.300	0.02	22.5	1.14	0.175	0.00	15.0	0.19	0.37

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 94$ (Pu)														
116	210	0.375	0.04	15.0	0.90	0.300	0.00	22.5	1.45	0.225	0.04	37.5	0.25	0.55
117	211	0.375	0.04	12.5	0.80	0.325	0.02	20.0	1.50	0.150	0.02	7.5	−0.12	0.70
118	212	0.400	0.04	10.0	0.80	0.325	0.02	20.0	1.76	0.150	0.02	0.0	−0.19	0.96
119	213	0.400	0.02	10.0	0.68	0.325	0.02	17.5	1.90	0.175	0.02	52.5	−0.44	1.21
		0.400	0.02	10.0	0.68	0.325	0.02	17.5	1.90	0.125	0.02	0.0	−0.48	1.21
		0.175	0.02	52.5	−0.44	0.150	0.02	27.5	−0.21	0.125	0.02	0.0	−0.48	0.23
120	214	0.400	0.04	10.0	0.74	0.325	0.00	22.5	2.04	0.150	0.02	60.0	−0.83	1.30
121	215	0.425	0.04	12.5	0.68	0.325	0.00	22.5	2.02	0.125	0.02	57.5	−1.21	1.34
122	216	0.425	0.04	12.5	0.87	0.350	0.02	20.0	2.07	0.100	0.02	60.0	−1.36	1.20
123	217	0.425	0.06	12.5	0.79	0.350	0.02	20.0	2.05	0.100	0.02	57.5	−1.95	1.26
124	218	0.425	0.06	12.5	0.92	0.350	0.02	17.5	2.03	0.250	0.04	60.0	0.16	1.11
		0.425	0.06	12.5	0.92	0.350	0.02	17.5	2.03	0.075	0.02	60.0	−2.22	1.11
		0.250	0.04	60.0	0.16	0.200	0.02	60.0	0.63	0.075	0.02	60.0	−2.22	0.47
125	219	0.425	0.06	15.0	0.79	0.350	0.02	22.5	1.91	0.250	0.02	60.0	0.07	1.12
		0.425	0.06	15.0	0.79	0.350	0.02	22.5	1.91	0.000	0.00	0.0	−2.79	1.12
		0.250	0.02	60.0	0.07	0.200	0.02	55.0	0.84	0.000	0.00	0.0	−2.79	0.77
126	220	0.400	0.06	12.5	0.93	0.350	0.02	22.5	1.82	0.250	0.02	60.0	0.44	0.89
		0.400	0.06	12.5	0.93	0.350	0.02	22.5	1.82	0.000	0.00	0.0	−2.99	0.89
		0.250	0.02	60.0	0.44	0.200	0.02	62.5	1.30	0.000	0.00	0.0	−2.99	0.87
127	221	0.400	0.06	12.5	0.83	0.375	0.04	20.0	1.60	0.275	0.02	55.0	0.74	0.77
		0.400	0.06	12.5	0.83	0.375	0.04	20.0	1.60	0.025	0.00	60.0	−1.97	0.77
		0.275	0.02	55.0	0.74	0.200	0.00	47.5	1.44	0.025	0.00	60.0	−1.97	0.70
128	222	0.325	0.00	25.0	1.32	0.300	−0.02	32.5	1.53	0.275	0.02	52.5	1.20	0.21
		0.325	0.00	25.0	1.32	0.375	0.04	20.0	1.59	0.400	0.08	10.0	0.99	0.27
		0.325	0.00	25.0	1.32	0.225	−0.02	35.0	1.79	0.000	0.00	0.0	−1.08	0.47
		0.275	0.02	52.5	1.20	0.375	0.04	20.0	1.59	0.400	0.08	10.0	0.99	0.39
		0.275	0.02	52.5	1.20	0.225	−0.02	35.0	1.79	0.000	0.00	0.0	−1.08	0.58
		0.400	0.08	10.0	0.99	0.225	−0.02	35.0	1.79	0.000	0.00	0.0	−1.08	0.79
129	223	0.350	0.02	25.0	1.04	0.375	0.04	22.5	1.34	0.400	0.08	10.0	0.83	0.30
		0.350	0.02	25.0	1.04	0.225	−0.04	32.5	1.77	0.075	−0.04	0.0	0.06	0.72
		0.400	0.08	10.0	0.83	0.225	−0.04	32.5	1.77	0.075	−0.04	0.0	0.06	0.94
130	224	0.350	0.02	25.0	0.99	0.400	0.06	20.0	1.37	0.375	0.08	0.0	0.74	0.38
		0.350	0.02	25.0	0.99	0.275	−0.02	10.0	1.71	0.100	−0.06	0.0	0.51	0.72
		0.375	0.08	0.0	0.74	0.275	−0.02	10.0	1.71	0.100	−0.06	0.0	0.51	0.97
131	225	0.350	0.02	25.0	0.75	0.400	0.06	17.5	1.28	0.375	0.08	0.0	0.42	0.53
		0.350	0.02	25.0	0.75	0.250	−0.04	12.5	1.51	0.125	−0.06	0.0	0.42	0.77
		0.375	0.08	0.0	0.42	0.250	−0.04	12.5	1.51	0.125	−0.06	0.0	0.42	1.09
132	226	0.350	0.02	25.0	0.79	0.350	0.04	15.0	1.26	0.400	0.10	0.0	0.32	0.46
		0.350	0.02	25.0	0.79	0.275	−0.02	15.0	1.36	0.150	−0.08	0.0	0.35	0.56
		0.400	0.10	0.0	0.32	0.275	−0.02	15.0	1.36	0.150	−0.08	0.0	0.35	1.00
133	227	0.375	0.04	25.0	0.70	0.375	0.06	12.5	1.04	0.400	0.10	0.0	0.05	0.35
		0.375	0.04	25.0	0.70	0.250	−0.04	15.0	1.10	0.175	−0.08	0.0	−0.09	0.40
		0.400	0.10	0.0	0.05	0.250	−0.04	15.0	1.10	0.175	−0.08	0.0	−0.09	1.05
134	228	0.325	0.02	17.5	0.70	0.375	0.06	10.0	1.02	0.400	0.10	0.0	0.07	0.32
		0.325	0.02	17.5	0.70	0.250	−0.04	15.0	0.93	0.175	−0.08	0.0	−0.34	0.23
		0.400	0.10	0.0	0.07	0.375	0.06	10.0	1.02	0.175	−0.08	0.0	−0.34	0.95
135	229	0.375	0.08	0.0	0.12	0.350	0.04	10.0	0.71	0.175	−0.08	0.0	−0.75	0.58
136	230	0.375	0.08	0.0	0.38	0.350	0.06	7.5	0.78	0.275	−0.02	22.5	0.17	0.40
		0.375	0.08	0.0	0.38	0.350	0.06	7.5	0.78	0.175	−0.08	0.0	−0.93	0.40
		0.275	−0.02	22.5	0.17	0.250	−0.04	15.0	0.38	0.175	−0.08	0.0	−0.93	0.21

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 95$ (Am)														
117	212	0.375	0.04	15.0	0.52	0.325	0.02	20.0	0.96	0.150	0.02	5.0	−0.28	0.44
118	213	0.400	0.04	10.0	0.58	0.325	0.02	20.0	1.18	0.150	0.02	0.0	−0.35	0.60
119	214	0.400	0.02	10.0	0.43	0.325	0.02	20.0	1.33	0.150	0.02	0.0	−0.53	0.89
120	215	0.425	0.04	12.5	0.51	0.350	0.02	20.0	1.43	0.150	0.02	60.0	−0.59	0.93
121	216	0.425	0.04	12.5	0.39	0.350	0.02	20.0	1.50	0.125	0.02	52.5	−0.90	1.11
122	217	0.425	0.04	12.5	0.58	0.325	0.02	20.0	1.62	0.100	0.02	60.0	−1.05	1.04
123	218	0.425	0.06	15.0	0.50	0.325	0.02	20.0	1.59	0.250	0.04	60.0	−0.03	1.09
		0.425	0.06	15.0	0.50	0.325	0.02	20.0	1.59	0.100	0.02	52.5	−1.65	1.09
		0.250	0.04	60.0	−0.03	0.200	0.02	62.5	0.26	0.100	0.02	52.5	−1.65	0.29
124	219	0.425	0.06	15.0	0.62	0.350	0.02	22.5	1.61	0.250	0.04	60.0	0.19	0.98
		0.425	0.06	15.0	0.62	0.350	0.02	22.5	1.61	0.075	0.02	60.0	−1.84	0.98
		0.250	0.04	60.0	0.19	0.200	0.02	55.0	0.79	0.075	0.02	60.0	−1.84	0.60
125	220	0.425	0.06	15.0	0.51	0.350	0.02	22.5	1.46	0.250	0.02	57.5	0.13	0.95
		0.425	0.06	15.0	0.51	0.350	0.02	22.5	1.46	0.025	0.00	60.0	−2.25	0.95
		0.250	0.02	57.5	0.13	0.200	0.02	52.5	0.98	0.025	0.00	60.0	−2.25	0.85
126	221	0.425	0.06	15.0	0.68	0.350	0.02	20.0	1.45	0.275	0.02	55.0	0.45	0.77
		0.425	0.06	15.0	0.68	0.350	0.02	20.0	1.45	0.000	0.00	0.0	−2.36	0.77
		0.275	0.02	55.0	0.45	0.200	0.00	45.0	1.42	0.000	0.00	0.0	−2.36	0.97
127	222	0.275	0.02	52.5	0.69	0.350	0.02	20.0	1.25	0.425	0.06	15.0	0.61	0.56
		0.275	0.02	52.5	0.69	0.200	−0.02	35.0	1.49	0.025	0.00	42.5	−1.43	0.80
		0.425	0.06	15.0	0.61	0.200	−0.02	35.0	1.49	0.025	0.00	42.5	−1.43	0.88
128	223	0.425	0.08	15.0	0.84	0.375	0.04	17.5	1.23	0.325	0.00	25.0	0.82	0.39
		0.425	0.08	15.0	0.84	0.275	−0.02	10.0	1.56	0.025	0.00	32.5	−0.49	0.72
		0.325	0.00	25.0	0.82	0.275	−0.02	10.0	1.56	0.025	0.00	32.5	−0.49	0.74
129	224	0.400	0.08	2.5	0.77	0.375	0.04	22.5	1.01	0.350	0.02	25.0	0.60	0.24
		0.400	0.08	2.5	0.77	0.275	−0.02	10.0	1.37	0.100	−0.04	0.0	0.35	0.60
		0.350	0.02	25.0	0.60	0.275	−0.02	10.0	1.37	0.100	−0.04	0.0	0.35	0.77
130	225	0.375	0.08	0.0	0.65	0.350	0.04	17.5	1.09	0.350	0.02	25.0	0.52	0.44
		0.375	0.08	0.0	0.65	0.300	0.00	10.0	1.28	0.125	−0.06	0.0	0.58	0.63
		0.350	0.02	25.0	0.52	0.300	0.00	10.0	1.28	0.125	−0.06	0.0	0.58	0.70
131	226	0.400	0.10	0.0	0.34	0.275	−0.02	7.5	1.05	0.200	−0.06	0.0	0.38	0.67
		0.400	0.10	0.0	0.34	0.375	0.06	15.0	0.98	0.350	0.02	25.0	0.29	0.64
		0.200	−0.06	0.0	0.38	0.275	−0.02	7.5	1.05	0.350	0.02	25.0	0.29	0.67
132	227	0.350	0.02	25.0	0.33	0.350	0.04	12.5	0.96	0.400	0.10	0.0	0.19	0.63
		0.350	0.02	25.0	0.33	0.275	−0.02	15.0	0.94	0.200	−0.06	0.0	0.17	0.61
		0.400	0.10	0.0	0.19	0.275	−0.02	15.0	0.94	0.200	−0.06	0.0	0.17	0.75
133	228	0.350	0.02	22.5	0.25	0.350	0.04	10.0	0.72	0.400	0.10	0.0	−0.07	0.47
		0.350	0.02	22.5	0.25	0.250	−0.04	15.0	0.68	0.175	−0.08	0.0	−0.21	0.44
		0.400	0.10	0.0	−0.07	0.350	0.04	10.0	0.72	0.175	−0.08	0.0	−0.21	0.79
134	229	0.325	0.02	20.0	0.18	0.375	0.06	7.5	0.81	0.400	0.10	0.0	−0.05	0.63
		0.325	0.02	20.0	0.18	0.250	−0.04	15.0	0.52	0.175	−0.08	0.0	−0.46	0.34
		0.400	0.10	0.0	−0.05	0.375	0.06	7.5	0.81	0.175	−0.08	0.0	−0.46	0.86
135	230	0.400	0.10	0.0	0.07	0.350	0.06	5.0	0.42	0.300	0.00	20.0	−0.13	0.35
		0.400	0.10	0.0	0.07	0.350	0.06	5.0	0.42	0.175	−0.08	0.0	−0.87	0.35
		0.300	0.00	20.0	−0.13	0.250	−0.04	15.0	0.15	0.175	−0.08	0.0	−0.87	0.29
136	231	0.300	0.00	22.5	−0.29	0.250	−0.04	17.5	−0.02	0.175	−0.08	0.0	−1.05	0.27
145	240	0.275	0.00	22.5	−1.72	0.275	0.00	15.0	−1.42	0.225	−0.04	0.0	−2.46	0.30
146	241	0.275	0.00	22.5	−1.61	0.275	0.00	15.0	−1.33	0.225	−0.04	0.0	−2.32	0.28
147	242	0.275	0.02	22.5	−1.89	0.250	0.00	12.5	−1.61	0.225	−0.04	0.0	−2.55	0.28
148	243	0.275	0.02	20.0	−1.89	0.250	0.00	12.5	−1.65	0.225	−0.02	0.0	−2.40	0.25

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 96$ (Cm)														
119	215	0.425	0.04	12.5	0.33	0.325	0.02	20.0	1.16	0.150	0.02	0.0	−0.68	0.83
120	216	0.425	0.04	12.5	0.37	0.325	0.02	20.0	1.32	0.125	0.02	0.0	−0.44	0.95
		0.425	0.04	12.5	0.37	0.325	0.02	20.0	1.32	0.150	0.02	60.0	−0.48	0.95
		0.125	0.02	0.0	−0.44	0.125	0.02	30.0	−0.20	0.150	0.02	60.0	−0.48	0.24
121	217	0.425	0.04	12.5	0.26	0.325	0.02	20.0	1.38	0.125	0.02	52.5	−0.81	1.12
122	218	0.425	0.04	12.5	0.44	0.350	0.02	17.5	1.42	0.100	0.02	60.0	−0.95	0.98
123	219	0.425	0.04	12.5	0.40	0.350	0.02	17.5	1.44	0.250	0.04	60.0	0.14	1.04
		0.425	0.04	12.5	0.40	0.350	0.02	17.5	1.44	0.100	0.02	52.5	−1.54	1.04
		0.250	0.04	60.0	0.14	0.200	0.02	60.0	0.40	0.100	0.02	52.5	−1.54	0.26
124	220	0.425	0.04	12.5	0.66	0.350	0.02	22.5	1.54	0.250	0.04	60.0	0.35	0.88
		0.425	0.04	12.5	0.66	0.350	0.02	22.5	1.54	0.075	0.02	60.0	−1.72	0.88
		0.250	0.04	60.0	0.35	0.200	0.02	55.0	0.92	0.075	0.02	60.0	−1.72	0.57
125	221	0.425	0.06	12.5	0.54	0.350	0.02	20.0	1.42	0.250	0.02	57.5	0.29	0.88
		0.425	0.06	12.5	0.54	0.350	0.02	20.0	1.42	0.000	0.00	0.0	−2.16	0.88
		0.250	0.02	57.5	0.29	0.200	0.02	50.0	1.11	0.000	0.00	0.0	−2.16	0.82
126	222	0.425	0.06	12.5	0.71	0.375	0.04	17.5	1.33	0.275	0.02	55.0	0.57	0.62
		0.425	0.06	12.5	0.71	0.200	0.00	42.5	1.52	0.000	0.00	0.0	−2.34	0.81
		0.275	0.02	55.0	0.57	0.200	0.00	42.5	1.52	0.000	0.00	0.0	−2.34	0.95
127	223	0.275	0.02	52.5	0.81	0.300	0.00	35.0	1.07	0.325	0.02	27.5	0.81	0.26
		0.275	0.02	52.5	0.81	0.375	0.04	17.5	1.23	0.425	0.06	15.0	0.66	0.42
		0.275	0.02	52.5	0.81	0.225	0.00	37.5	1.57	0.025	0.00	57.5	−1.30	0.76
		0.325	0.02	27.5	0.81	0.375	0.04	17.5	1.23	0.425	0.06	15.0	0.66	0.42
		0.325	0.02	27.5	0.81	0.225	0.00	37.5	1.57	0.025	0.00	57.5	−1.30	0.76
		0.425	0.06	15.0	0.66	0.225	0.00	37.5	1.57	0.025	0.00	57.5	−1.30	0.91
128	224	0.425	0.06	15.0	0.92	0.375	0.04	20.0	1.28	0.325	0.00	25.0	0.75	0.36
		0.425	0.06	15.0	0.92	0.275	−0.02	10.0	1.49	0.000	0.00	0.0	−0.43	0.57
		0.325	0.00	25.0	0.75	0.275	−0.02	10.0	1.49	0.000	0.00	0.0	−0.43	0.74
129	225	0.350	0.02	25.0	0.53	0.275	−0.02	10.0	1.30	0.100	−0.04	0.0	0.54	0.76
130	226	0.400	0.08	0.0	0.91	0.275	−0.02	10.0	1.23	0.125	−0.06	0.0	0.86	0.32
		0.400	0.08	0.0	0.91	0.375	0.06	12.5	1.21	0.350	0.02	25.0	0.46	0.31
		0.125	−0.06	0.0	0.86	0.275	−0.02	10.0	1.23	0.350	0.02	25.0	0.46	0.38
131	227	0.400	0.08	0.0	0.61	0.350	0.04	12.5	1.03	0.200	−0.06	0.0	0.54	0.43
		0.400	0.08	0.0	0.61	0.350	0.04	12.5	1.03	0.350	0.02	25.0	0.23	0.43
		0.200	−0.06	0.0	0.54	0.275	−0.02	7.5	0.98	0.350	0.02	25.0	0.23	0.44
132	228	0.400	0.10	0.0	0.51	0.350	0.04	10.0	1.04	0.350	0.02	25.0	0.27	0.54
		0.400	0.10	0.0	0.51	0.350	0.04	10.0	1.04	0.200	−0.06	0.0	0.34	0.54
		0.350	0.02	25.0	0.27	0.275	−0.02	15.0	0.93	0.200	−0.06	0.0	0.34	0.59
133	229	0.400	0.10	0.0	0.24	0.375	0.06	7.5	0.86	0.325	0.02	20.0	0.08	0.62
		0.400	0.10	0.0	0.24	0.375	0.06	7.5	0.86	0.200	−0.06	0.0	0.02	0.62
		0.325	0.02	20.0	0.08	0.250	−0.04	15.0	0.69	0.200	−0.06	0.0	0.02	0.61
134	230	0.400	0.10	0.0	0.27	0.350	0.06	10.0	0.78	0.325	0.02	20.0	0.06	0.51
		0.400	0.10	0.0	0.27	0.350	0.06	10.0	0.78	0.200	−0.06	0.0	−0.19	0.51
		0.325	0.02	20.0	0.06	0.250	−0.04	15.0	0.53	0.200	−0.06	0.0	−0.19	0.47
135	231	0.375	0.08	0.0	0.30	0.350	0.06	−2.5	0.52	0.300	0.00	20.0	−0.20	0.22
		0.375	0.08	0.0	0.30	0.350	0.06	−2.5	0.52	0.200	−0.06	0.0	−0.54	0.22
		0.300	0.00	20.0	−0.20	0.250	−0.02	17.5	0.22	0.200	−0.06	0.0	−0.54	0.43
136	232	0.300	0.00	22.5	−0.36	0.250	−0.02	17.5	0.04	0.200	−0.06	0.0	−0.71	0.39
137	233	0.300	0.00	20.0	−0.63	0.250	−0.04	15.0	−0.42	0.200	−0.06	0.0	−1.09	0.21
138	234	0.300	0.00	22.5	−0.83	0.250	−0.02	17.5	−0.53	0.200	−0.06	0.0	−1.23	0.30
139	235	0.300	0.00	22.5	−1.16	0.250	−0.02	17.5	−0.90	0.200	−0.06	0.0	−1.65	0.26

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 96$ (Cm)														
145	241	0.275	0.00	22.5	−1.75	0.275	0.00	15.0	−1.46	0.225	−0.04	0.0	−2.47	0.29
146	242	0.275	0.02	20.0	−1.67	0.250	0.00	15.0	−1.40	0.225	−0.04	0.0	−2.33	0.28
147	243	0.275	0.02	20.0	−2.03	0.250	0.00	12.5	−1.75	0.225	−0.02	0.0	−2.60	0.28
148	244	0.275	0.02	20.0	−2.04	0.250	0.00	12.5	−1.78	0.225	−0.02	0.0	−2.58	0.26
$Z = 97$ (Bk)														
121	218	0.300	0.02	30.0	0.23	0.275	0.04	40.0	0.54	0.125	0.02	47.5	−0.74	0.31
122	219	0.300	0.02	30.0	0.31	0.275	0.02	40.0	0.66	0.125	0.02	47.5	−0.84	0.35
123	220	0.250	0.04	60.0	0.12	0.200	0.02	52.5	0.46	0.100	0.02	50.0	−1.37	0.34
124	221	0.300	0.02	30.0	0.46	0.300	0.02	37.5	0.68	0.250	0.04	57.5	0.32	0.22
		0.300	0.02	30.0	0.46	0.200	0.02	47.5	0.96	0.075	0.02	60.0	−1.49	0.50
		0.250	0.04	57.5	0.32	0.200	0.02	47.5	0.96	0.075	0.02	60.0	−1.49	0.64
125	222	0.275	0.04	55.0	0.28	0.200	0.00	40.0	1.11	0.025	0.00	57.5	−1.79	0.83
126	223	0.275	0.02	52.5	0.48	0.300	0.00	37.5	0.81	0.325	0.02	27.5	0.48	0.32
		0.275	0.02	52.5	0.48	0.275	0.00	15.0	1.21	0.000	0.00	0.0	−1.94	0.73
		0.325	0.02	27.5	0.48	0.275	0.00	15.0	1.21	0.000	0.00	0.0	−1.94	0.73
127	224	0.425	0.06	15.0	0.61	0.375	0.04	17.5	0.99	0.325	0.02	27.5	0.37	0.38
		0.425	0.06	15.0	0.61	0.250	−0.02	12.5	1.11	0.025	0.00	60.0	−0.94	0.50
		0.325	0.02	27.5	0.37	0.250	−0.02	12.5	1.11	0.025	0.00	60.0	−0.94	0.74
128	225	0.325	0.02	25.0	0.31	0.300	0.00	12.5	1.05	0.025	0.00	12.5	−0.04	0.74
129	226	0.225	−0.04	0.0	0.52	0.275	−0.02	10.0	0.87	0.350	0.02	25.0	0.16	0.35
130	227	0.400	0.08	0.0	0.90	0.375	0.06	10.0	1.12	0.225	−0.04	0.0	0.44	0.22
		0.400	0.08	0.0	0.90	0.375	0.06	10.0	1.12	0.350	0.02	25.0	0.08	0.22
		0.225	−0.04	0.0	0.44	0.275	−0.02	10.0	0.80	0.350	0.02	25.0	0.08	0.36
131	228	0.400	0.08	0.0	0.60	0.350	0.04	10.0	0.88	0.225	−0.04	0.0	0.23	0.28
		0.400	0.08	0.0	0.60	0.350	0.04	10.0	0.88	0.350	0.02	25.0	−0.14	0.28
		0.225	−0.04	0.0	0.23	0.275	−0.02	7.5	0.54	0.350	0.02	25.0	−0.14	0.31
132	229	0.400	0.08	0.0	0.58	0.350	0.06	10.0	0.84	0.200	−0.06	0.0	0.14	0.27
		0.400	0.08	0.0	0.58	0.350	0.06	10.0	0.84	0.325	0.02	22.5	−0.12	0.27
		0.200	−0.06	0.0	0.14	0.300	0.00	7.5	0.51	0.325	0.02	22.5	−0.12	0.38
133	230	0.400	0.10	0.0	0.37	0.350	0.06	7.5	0.59	0.200	−0.06	0.0	−0.18	0.23
		0.400	0.10	0.0	0.37	0.350	0.06	7.5	0.59	0.325	0.02	20.0	−0.36	0.23
		0.200	−0.06	0.0	−0.18	0.275	−0.02	17.5	0.23	0.325	0.02	20.0	−0.36	0.41
134	231	0.400	0.10	0.0	0.38	0.375	0.08	5.0	0.60	0.200	−0.06	0.0	−0.39	0.21
		0.400	0.10	0.0	0.38	0.375	0.08	5.0	0.60	0.325	0.02	20.0	−0.37	0.21
		0.200	−0.06	0.0	−0.39	0.250	−0.02	7.5	0.10	0.325	0.02	20.0	−0.37	0.47
135	232	0.300	0.00	20.0	−0.60	0.250	−0.02	15.0	−0.22	0.200	−0.06	0.0	−0.73	0.38
136	233	0.300	0.00	22.5	−0.75	0.250	−0.02	15.0	−0.41	0.200	−0.06	0.0	−0.90	0.34
137	234	0.300	0.00	20.0	−1.03	0.250	−0.02	15.0	−0.76	0.200	−0.06	0.0	−1.27	0.26
138	235	0.300	0.00	22.5	−1.22	0.250	−0.02	15.0	−0.98	0.200	−0.06	0.0	−1.42	0.25
139	236	0.300	0.00	22.5	−1.55	0.250	−0.02	15.0	−1.34	0.200	−0.06	0.0	−1.82	0.21
143	240	0.300	0.02	25.0	−2.05	0.250	−0.02	15.0	−1.82	0.225	−0.04	0.0	−2.59	0.22
144	241	0.300	0.02	25.0	−1.95	0.250	−0.02	15.0	−1.70	0.225	−0.04	0.0	−2.54	0.25
145	242	0.300	0.02	25.0	−2.21	0.275	0.00	15.0	−1.87	0.225	−0.04	0.0	−2.80	0.34
146	243	0.300	0.04	22.5	−2.14	0.250	0.00	12.5	−1.88	0.225	−0.02	0.0	−2.69	0.26
147	244	0.300	0.04	22.5	−2.51	0.250	0.00	12.5	−2.22	0.225	−0.02	0.0	−3.05	0.29
148	245	0.275	0.02	20.0	−2.50	0.250	0.00	12.5	−2.25	0.225	−0.02	0.0	−3.04	0.24
$Z = 98$ (Cf)														
123	221	0.250	0.04	60.0	0.20	0.200	0.02	52.5	0.49	0.100	0.02	47.5	−1.41	0.29
124	222	0.250	0.04	60.0	0.40	0.275	0.02	40.0	0.68	0.300	0.02	30.0	0.44	0.23
		0.250	0.04	60.0	0.40	0.200	0.02	45.0	0.98	0.075	0.02	60.0	−1.57	0.58

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 98$ (Cf)														
124	222	0.300	0.02	30.0	0.44	0.200	0.02	47.5	0.98	0.075	0.02	60.0	−1.57	0.53
125	223	0.275	0.04	55.0	0.33	0.200	0.00	40.0	1.08	0.025	0.00	57.5	−1.88	0.75
126	224	0.275	0.02	57.5	0.54	0.275	0.02	40.0	0.78	0.325	0.02	27.5	0.44	0.25
		0.275	0.02	57.5	0.54	0.275	0.00	15.0	1.19	0.000	0.00	0.0	−2.05	0.65
		0.325	0.02	27.5	0.44	0.275	0.00	15.0	1.19	0.000	0.00	0.0	−2.05	0.75
127	225	0.250	−0.02	0.0	0.65	0.275	0.00	12.5	1.07	0.325	0.02	27.5	0.32	0.42
		0.250	−0.02	0.0	0.65	0.175	−0.04	5.0	1.03	0.025	0.00	60.0	−1.02	0.38
		0.325	0.02	27.5	0.32	0.275	0.00	12.5	1.07	0.025	0.00	60.0	−1.02	0.75
128	226	0.425	0.06	15.0	0.90	0.400	0.04	17.5	1.13	0.250	−0.02	0.0	0.61	0.24
		0.425	0.06	15.0	0.90	0.400	0.04	17.5	1.13	0.325	0.02	25.0	0.27	0.24
		0.425	0.06	15.0	0.90	0.400	0.04	17.5	1.13	0.000	0.00	0.0	−0.19	0.24
		0.250	−0.02	0.0	0.61	0.275	0.00	12.5	1.01	0.325	0.02	25.0	0.27	0.40
		0.250	−0.02	0.0	0.61	0.175	−0.04	10.0	1.04	0.000	0.00	0.0	−0.19	0.43
		0.325	0.02	25.0	0.27	0.275	0.00	12.5	1.01	0.000	0.00	0.0	−0.19	0.74
129	227	0.250	−0.02	0.0	0.43	0.300	0.00	12.5	0.82	0.325	0.02	25.0	0.12	0.39
130	228	0.250	−0.02	0.0	0.42	0.275	0.00	10.0	0.71	0.350	0.02	25.0	0.13	0.30
131	229	0.400	0.08	0.0	0.87	0.375	0.06	7.5	1.10	0.250	−0.02	0.0	0.25	0.23
		0.400	0.08	0.0	0.87	0.375	0.06	7.5	1.10	0.350	0.02	25.0	−0.10	0.23
		0.250	−0.02	0.0	0.25	0.300	0.02	10.0	0.46	0.350	0.02	25.0	−0.10	0.21
132	230	0.400	0.08	0.0	0.85	0.350	0.06	7.5	1.05	0.325	0.02	22.5	−0.14	0.20
137	235	0.200	−0.06	0.0	−0.98	0.250	−0.02	15.0	−0.77	0.300	0.02	20.0	−0.97	0.20
142	240	0.300	0.02	25.0	−1.77	0.250	−0.02	17.5	−1.55	0.225	−0.04	0.0	−2.12	0.22
143	241	0.300	0.02	25.0	−2.03	0.275	0.00	17.5	−1.76	0.225	−0.04	0.0	−2.45	0.28
144	242	0.300	0.02	25.0	−1.93	0.250	−0.02	15.0	−1.66	0.225	−0.04	0.0	−2.40	0.27
145	243	0.300	0.04	22.5	−2.19	0.250	0.00	15.0	−1.90	0.225	−0.02	0.0	−2.68	0.29
146	244	0.300	0.04	22.5	−2.21	0.250	0.00	12.5	−1.94	0.225	−0.02	0.0	−2.70	0.26
147	245	0.300	0.04	22.5	−2.58	0.250	0.00	12.5	−2.28	0.225	−0.02	0.0	−3.05	0.30
148	246	0.300	0.04	22.5	−2.54	0.250	0.00	12.5	−2.30	0.225	−0.02	0.0	−3.04	0.24
159	257	0.425	0.00	17.5	1.83	0.375	0.00	17.5	2.07	0.225	0.04	0.0	−2.72	0.24
$Z = 99$ (Es)														
125	224	0.325	0.02	30.0	0.17	0.275	0.00	20.0	0.83	0.025	0.00	60.0	−1.73	0.66
126	225	0.250	0.00	0.0	0.47	0.275	0.00	17.5	0.81	0.325	0.02	30.0	0.20	0.34
		0.250	0.00	0.0	0.47	0.175	−0.02	12.5	0.71	0.000	0.00	0.0	−1.88	0.24
		0.325	0.02	30.0	0.20	0.275	0.00	17.5	0.81	0.000	0.00	0.0	−1.88	0.61
127	226	0.250	−0.02	0.0	0.25	0.275	0.00	17.5	0.73	0.325	0.02	30.0	0.11	0.49
		0.250	−0.02	0.0	0.25	0.200	−0.02	12.5	0.67	0.025	0.00	60.0	−0.86	0.42
		0.325	0.02	30.0	0.11	0.275	0.00	17.5	0.73	0.025	0.00	60.0	−0.86	0.62
128	227	0.250	−0.02	0.0	0.20	0.300	0.00	17.5	0.70	0.325	0.02	27.5	0.10	0.50
		0.250	−0.02	0.0	0.20	0.150	−0.04	10.0	0.88	0.000	0.00	0.0	−0.02	0.68
		0.325	0.02	27.5	0.10	0.150	−0.04	10.0	0.88	0.000	0.00	0.0	−0.02	0.79
129	228	0.325	0.02	27.5	−0.00	0.300	0.00	17.5	0.54	0.250	−0.02	0.0	0.03	0.51
130	229	0.325	0.02	27.5	−0.04	0.300	0.00	17.5	0.47	0.250	−0.02	0.0	0.01	0.45
131	230	0.250	−0.02	0.0	−0.15	0.325	0.02	17.5	0.18	0.350	0.02	27.5	−0.15	0.33
132	231	0.250	−0.02	0.0	−0.15	0.300	0.02	15.0	0.07	0.325	0.02	25.0	−0.20	0.21
147	246	0.300	0.04	22.5	−2.80	0.275	0.02	15.0	−2.60	0.225	−0.02	0.0	−3.39	0.21
$Z = 100$ (Fm)														
126	226	0.275	0.02	60.0	0.37	0.225	−0.02	30.0	1.02	0.250	0.00	0.0	0.39	0.63
		0.275	0.02	60.0	0.37	0.225	−0.02	30.0	1.02	0.000	0.00	0.0	−2.19	0.65
		0.250	0.00	0.0	0.39	0.200	−0.02	10.0	0.73	0.000	0.00	0.0	−2.19	0.34
127	227	0.325	0.02	30.0	0.31	0.300	0.00	20.0	0.95	0.250	0.00	0.0	0.25	0.63

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 100$ (Fm)														
127	227	0.325	0.02	30.0	0.31	0.300	0.00	20.0	0.95	0.025	0.00	55.0	−1.13	0.63
		0.250	0.00	0.0	0.25	0.200	−0.02	10.0	0.71	0.025	0.00	55.0	−1.13	0.46
128	228	0.325	0.02	30.0	0.33	0.300	0.02	20.0	0.88	0.250	−0.02	0.0	0.28	0.55
		0.325	0.02	30.0	0.33	0.300	0.02	20.0	0.88	0.000	0.00	0.0	−0.33	0.55
		0.250	−0.02	0.0	0.28	0.150	−0.02	15.0	0.93	0.000	0.00	0.0	−0.33	0.65
129	229	0.100	−0.02	0.0	0.68	0.150	−0.04	10.0	0.96	0.350	0.02	27.5	0.25	0.28
		0.100	−0.02	0.0	0.68	0.150	−0.04	10.0	0.96	0.275	0.00	0.0	0.12	0.28
		0.350	0.02	27.5	0.25	0.300	0.00	15.0	0.80	0.275	0.00	0.0	0.12	0.56
130	230	0.350	0.02	27.5	0.20	0.300	0.00	15.0	0.73	0.275	0.00	0.0	0.07	0.52
131	231	0.350	0.02	25.0	−0.03	0.300	0.02	15.0	0.42	0.275	0.00	0.0	−0.18	0.44
132	232	0.350	0.02	25.0	0.02	0.300	0.02	15.0	0.28	0.275	0.00	0.0	−0.19	0.26
$Z = 101$ (Md)														
128	229	0.325	0.02	35.0	0.24	0.250	0.00	32.5	0.85	0.250	0.00	0.0	0.09	0.60
		0.325	0.02	35.0	0.24	0.250	0.00	32.5	0.85	0.000	0.00	0.0	−0.40	0.60
		0.250	0.00	0.0	0.09	0.150	−0.02	17.5	0.64	0.000	0.00	0.0	−0.40	0.55
129	230	0.350	0.04	32.5	0.17	0.275	0.00	30.0	0.72	0.275	0.00	0.0	−0.03	0.55
130	231	0.325	0.02	30.0	0.11	0.300	0.02	20.0	0.70	0.250	0.00	0.0	−0.02	0.59
131	232	0.350	0.02	25.0	−0.08	0.325	0.02	17.5	0.45	0.275	0.00	0.0	−0.33	0.53
132	233	0.350	0.02	25.0	−0.04	0.325	0.02	17.5	0.34	0.275	0.00	0.0	−0.34	0.39
133	234	0.325	0.02	32.5	−0.21	0.325	0.02	17.5	0.07	0.275	0.00	0.0	−0.57	0.28
134	235	0.325	0.02	32.5	−0.27	0.300	0.02	22.5	−0.03	0.275	0.02	0.0	−0.58	0.24
158	259	0.425	0.00	17.5	1.11	0.350	0.00	20.0	1.35	0.225	0.04	0.0	−3.95	0.24
159	260	0.425	0.00	17.5	0.82	0.350	0.00	17.5	1.41	0.225	0.04	0.0	−4.19	0.59
$Z = 102$ (No)														
130	232	0.350	0.02	27.5	0.33	0.250	0.00	27.5	0.92	0.250	0.00	0.0	0.13	0.59
131	233	0.350	0.02	27.5	0.13	0.275	0.02	30.0	0.82	0.275	0.00	0.0	−0.15	0.69
132	234	0.350	0.02	27.5	0.17	0.325	0.02	17.5	0.66	0.275	0.02	0.0	−0.17	0.49
133	235	0.325	0.02	32.5	0.06	0.325	0.02	17.5	0.38	0.275	0.02	0.0	−0.42	0.32
134	236	0.325	0.04	35.0	0.02	0.300	0.02	25.0	0.29	0.275	0.02	0.0	−0.48	0.28
157	259	0.425	0.00	20.0	1.00	0.350	0.00	20.0	1.33	0.225	0.04	0.0	−4.30	0.33
158	260	0.425	0.00	17.5	0.94	0.350	0.00	20.0	1.48	0.225	0.04	0.0	−4.10	0.54
159	261	0.425	0.00	17.5	0.64	0.350	0.00	20.0	1.54	0.200	0.04	0.0	−4.35	0.89
$Z = 103$ (Lr)														
132	235	0.375	0.02	27.5	−0.06	0.275	0.02	32.5	0.56	0.275	0.02	0.0	−0.41	0.63
133	236	0.375	0.02	27.5	−0.19	0.275	0.02	30.0	0.40	0.275	0.02	0.0	−0.65	0.59
134	237	0.325	0.04	35.0	−0.12	0.275	0.02	27.5	0.23	0.275	0.02	0.0	−0.72	0.36
135	238	0.325	0.04	35.0	−0.32	0.300	0.02	27.5	−0.02	0.275	0.02	0.0	−0.94	0.30
156	259	0.400	−0.02	20.0	0.85	0.350	0.00	22.5	1.14	0.225	0.04	0.0	−4.66	0.28
157	260	0.425	0.00	20.0	0.55	0.350	0.00	22.5	1.19	0.225	0.04	0.0	−4.84	0.64
158	261	0.425	0.00	17.5	0.49	0.350	0.00	22.5	1.36	0.225	0.04	0.0	−4.65	0.88
159	262	0.425	0.00	17.5	0.20	0.325	−0.04	7.5	1.21	0.200	0.04	0.0	−4.96	1.01
$Z = 104$ (Rf)														
134	238	0.375	0.02	30.0	−0.06	0.300	0.02	30.0	0.48	0.275	0.02	0.0	−0.51	0.54
135	239	0.375	0.02	30.0	−0.19	0.275	0.02	27.5	0.25	0.300	0.04	0.0	−0.73	0.44
136	240	0.350	0.04	35.0	−0.13	0.300	0.02	30.0	0.09	0.275	0.02	0.0	−0.71	0.22
155	259	0.400	0.00	20.0	0.76	0.350	0.00	22.5	1.12	0.225	0.04	0.0	−4.94	0.35
156	260	0.400	−0.02	17.5	0.72	0.325	0.02	22.5	1.25	0.225	0.04	0.0	−4.70	0.53
157	261	0.425	0.00	17.5	0.37	0.350	0.00	22.5	1.31	0.225	0.04	0.0	−4.89	0.94
158	262	0.425	0.00	17.5	0.31	0.325	−0.06	7.5	1.45	0.225	0.06	0.0	−4.74	1.14

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Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 104$ (Rf)														
159	263	0.425	0.00	17.5	0.01	0.325	−0.06	7.5	1.12	0.225	0.06	0.0	−5.13	1.11
160	264	0.325	−0.06	0.0	0.75	0.275	−0.02	0.0	1.25	0.200	0.06	0.0	−5.20	0.50
$Z = 105$ (Db)														
136	241	0.375	0.02	32.5	−0.40	0.300	0.04	30.0	0.20	0.300	0.04	0.0	−0.93	0.60
137	242	0.375	0.02	32.5	−0.59	0.300	0.04	30.0	−0.07	0.300	0.04	0.0	−1.08	0.52
138	243	0.350	0.02	32.5	−0.60	0.300	0.02	27.5	−0.27	0.250	0.00	15.0	−1.09	0.33
139	244	0.350	0.02	35.0	−0.81	0.325	0.02	30.0	−0.61	0.250	0.00	15.0	−1.42	0.20
154	259	0.400	−0.02	20.0	0.61	0.350	0.04	27.5	0.95	0.225	0.04	0.0	−5.33	0.34
155	260	0.400	−0.02	20.0	0.37	0.350	0.00	22.5	0.94	0.225	0.04	0.0	−5.46	0.57
156	261	0.400	−0.02	17.5	0.26	0.325	0.02	25.0	1.14	0.225	0.04	0.0	−5.23	0.88
157	262	0.425	0.00	17.5	−0.08	0.350	0.00	25.0	1.13	0.225	0.06	0.0	−5.46	1.21
158	263	0.425	0.00	17.5	−0.15	0.325	−0.06	7.5	1.15	0.225	0.06	0.0	−5.40	1.31
159	264	0.325	−0.06	0.0	0.63	0.350	−0.04	7.5	0.83	0.425	0.00	17.5	−0.44	0.21
		0.325	−0.06	0.0	0.63	0.300	−0.04	0.0	0.98	0.225	0.06	0.0	−5.78	0.35
		0.425	0.00	17.5	−0.44	0.300	−0.04	0.0	0.98	0.225	0.06	0.0	−5.78	1.41
160	265	0.325	−0.06	0.0	0.46	0.275	−0.02	0.0	1.16	0.200	0.06	0.0	−5.86	0.71
$Z = 106$ (Sg)														
138	244	0.375	0.02	32.5	−0.62	0.300	0.02	27.5	0.01	0.250	0.02	12.5	−0.90	0.63
139	245	0.375	0.02	35.0	−0.77	0.325	0.02	30.0	−0.34	0.250	0.02	12.5	−1.19	0.43
140	246	0.375	0.02	35.0	−0.67	0.325	0.02	30.0	−0.41	0.250	0.02	12.5	−1.32	0.26
154	260	0.400	−0.02	20.0	0.49	0.350	0.04	30.0	1.08	0.225	0.04	0.0	−5.27	0.59
155	261	0.400	−0.02	20.0	0.24	0.325	0.02	25.0	1.05	0.225	0.04	0.0	−5.41	0.81
156	262	0.400	−0.02	17.5	0.13	0.325	0.02	27.5	1.28	0.225	0.06	0.0	−5.23	1.15
157	263	0.425	0.00	17.5	−0.19	0.325	−0.06	7.5	1.33	0.225	0.06	0.0	−5.55	1.52
158	264	0.425	0.00	17.5	−0.23	0.350	−0.04	7.5	1.19	0.225	0.06	0.0	−5.49	1.42
159	265	0.425	0.00	17.5	−0.52	0.275	−0.02	0.0	1.07	0.225	0.06	0.0	−5.86	1.59
160	266	0.425	0.00	17.5	−0.41	0.300	−0.02	0.0	1.39	0.200	0.06	0.0	−5.98	1.80
$Z = 107$ (Bh)														
140	247	0.375	0.02	35.0	−1.01	0.325	0.02	30.0	−0.45	0.250	0.02	12.5	−1.51	0.56
141	248	0.375	0.02	35.0	−1.06	0.325	0.02	30.0	−0.69	0.250	0.02	12.5	−1.80	0.37
153	260	0.400	0.00	25.0	0.14	0.350	0.04	27.5	0.65	0.225	0.04	0.0	−5.71	0.50
154	261	0.400	−0.02	20.0	0.09	0.350	0.00	22.5	0.90	0.225	0.04	0.0	−5.65	0.82
155	262	0.400	−0.02	20.0	−0.15	0.375	0.04	30.0	0.97	0.225	0.06	0.0	−5.84	1.12
156	263	0.425	0.00	20.0	−0.25	0.375	0.04	30.0	1.16	0.225	0.06	0.0	−5.76	1.41
157	264	0.425	0.00	20.0	−0.56	0.350	−0.04	7.5	1.06	0.225	0.06	0.0	−6.07	1.62
158	265	0.425	0.00	17.5	−0.61	0.300	−0.02	0.0	1.02	0.225	0.06	0.0	−6.01	1.63
159	266	0.425	0.00	17.5	−0.89	0.275	−0.02	0.0	0.98	0.225	0.06	0.0	−6.38	1.87
160	267	0.425	0.00	17.5	−0.79	0.300	−0.02	0.0	1.21	0.225	0.08	0.0	−6.51	2.00
$Z = 108$ (Hs)														
142	250	0.375	0.02	35.0	−0.77	0.325	0.02	30.0	−0.52	0.250	0.04	12.5	−1.59	0.25
152	260	0.400	0.00	27.5	0.18	0.350	0.04	27.5	0.63	0.225	0.04	0.0	−5.26	0.45
153	261	0.400	0.00	25.0	−0.02	0.350	0.06	30.0	0.74	0.225	0.04	0.0	−5.43	0.76
154	262	0.400	0.00	22.5	−0.04	0.350	0.06	32.5	1.03	0.225	0.06	0.0	−5.43	1.06
155	263	0.400	0.00	22.5	−0.26	0.350	0.02	25.0	1.03	0.225	0.06	0.0	−5.68	1.29
156	264	0.425	0.00	20.0	−0.33	0.350	0.02	25.0	1.25	0.225	0.06	0.0	−5.59	1.58
157	265	0.425	0.00	20.0	−0.65	0.325	−0.06	2.5	1.10	0.225	0.06	0.0	−5.90	1.75
158	266	0.425	0.00	17.5	−0.68	0.300	−0.02	0.0	1.07	0.225	0.06	0.0	−5.84	1.75
159	267	0.425	0.00	17.5	−0.97	0.300	−0.02	0.0	1.07	0.225	0.08	0.0	−6.32	2.04
160	268	0.425	0.00	17.5	−0.86	0.300	−0.02	0.0	1.25	0.225	0.08	0.0	−6.47	2.11

Table (continued)

Nucleus		Minimum				Saddle				Minimum				S.H.
N	A	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	ϵ_2	ϵ_4	γ	E (MeV)	$E_{\rm sad}$ (MeV)
$Z = 109$ (Mt)														
152	261	0.400	0.00	27.5	−0.30	0.350	0.06	27.5	0.39	0.225	0.04	0.0	−5.31	0.69
153	262	0.400	0.00	27.5	−0.46	0.350	0.02	25.0	0.57	0.225	0.06	0.0	−5.54	1.03
154	263	0.400	0.00	25.0	−0.47	0.350	0.02	25.0	0.81	0.225	0.06	0.0	−5.58	1.28
155	264	0.425	0.00	22.5	−0.62	0.350	0.02	25.0	0.84	0.225	0.06	0.0	−5.83	1.46
156	265	0.425	0.00	22.5	−0.75	0.325	−0.04	0.0	1.12	0.225	0.06	0.0	−5.74	1.87
157	266	0.425	0.00	20.0	−1.03	0.325	−0.04	0.0	0.82	0.225	0.06	0.0	−6.05	1.86
158	267	0.425	0.00	20.0	−1.03	0.300	−0.02	0.0	0.85	0.200	0.06	0.0	−6.17	1.88
159	268	0.425	0.00	17.5	−1.32	0.300	−0.02	0.0	0.86	0.200	0.06	0.0	−6.67	2.18
160	269	0.425	0.00	17.5	−1.22	0.300	−0.02	0.0	1.03	0.200	0.08	0.0	−6.89	2.25
$Z = 110$ (Ds)														
152	262	0.425	0.00	27.5	−0.49	0.350	0.06	27.5	0.48	0.225	0.04	0.0	−4.73	0.97
153	263	0.425	0.00	27.5	−0.61	0.350	0.02	22.5	0.60	0.225	0.06	0.0	−4.97	1.21
154	264	0.425	0.00	25.0	−0.62	0.325	0.02	17.5	0.90	0.225	0.06	0.0	−5.01	1.52
155	265	0.425	0.00	25.0	−0.78	0.350	0.02	22.5	0.85	0.225	0.06	0.0	−5.26	1.63
156	266	0.425	0.00	22.5	−0.87	0.325	−0.04	0.0	1.06	0.225	0.06	0.0	−5.17	1.93
157	267	0.425	0.00	20.0	−1.12	0.325	−0.04	0.0	0.76	0.200	0.06	0.0	−5.66	1.88
158	268	0.425	0.00	20.0	−1.11	0.300	−0.02	0.0	0.80	0.200	0.06	0.0	−5.79	1.91
159	269	0.425	0.00	17.5	−1.40	0.300	−0.02	0.0	0.80	0.200	0.06	0.0	−6.29	2.21
160	270	0.425	0.00	17.5	−1.30	0.300	−0.02	0.0	0.98	0.200	0.08	0.0	−6.56	2.28
$Z = 111$ (Rg)														
152	263	0.425	−0.02	27.5	−0.95	0.350	0.06	25.0	0.32	0.200	0.04	0.0	−4.38	1.27
153	264	0.425	0.00	27.5	−1.03	0.350	0.02	22.5	0.35	0.200	0.04	0.0	−4.68	1.38
154	265	0.425	0.00	25.0	−1.07	0.325	0.02	17.5	0.65	0.200	0.04	0.0	−4.76	1.71
155	266	0.425	0.00	25.0	−1.22	0.325	0.00	15.0	0.66	0.200	0.04	0.0	−5.05	1.88
156	267	0.425	0.00	22.5	−1.30	0.325	−0.02	0.0	0.69	0.200	0.06	0.0	−5.11	1.99
157	268	0.425	0.00	20.0	−1.52	0.325	−0.04	0.0	0.41	0.200	0.06	0.0	−5.53	1.93
158	269	0.425	0.00	20.0	−1.52	0.300	−0.02	0.0	0.54	0.200	0.06	0.0	−5.68	2.05
159	270	0.425	0.00	17.5	−1.78	0.300	−0.02	0.0	0.54	0.200	0.06	0.0	−6.17	2.32
160	271	0.425	0.00	17.5	−1.68	0.275	0.00	0.0	0.82	0.200	0.08	0.0	−6.39	2.51
$Z = 112$ (Cn)														
153	265	0.425	0.00	27.5	−1.05	0.350	0.02	20.0	0.28	0.200	0.04	0.0	−4.06	1.33
154	266	0.425	0.00	25.0	−1.09	0.325	0.00	15.0	0.49	0.200	0.04	0.0	−4.15	1.59
155	267	0.425	0.00	25.0	−1.24	0.325	−0.02	10.0	0.49	0.200	0.04	0.0	−4.43	1.73
156	268	0.425	0.00	22.5	−1.35	0.325	−0.02	0.0	0.50	0.200	0.06	0.0	−4.47	1.86
157	269	0.425	0.00	20.0	−1.60	0.300	−0.02	0.0	0.29	0.200	0.06	0.0	−4.89	1.89
160	272	0.350	−0.04	0.0	−0.93	0.300	0.00	0.0	0.96	0.200	0.08	0.0	−5.77	1.89
$Z = 113$ (X)														
153	266	0.425	0.00	25.0	−1.38	0.350	0.00	17.5	−0.12	0.200	0.04	0.0	−3.74	1.25
154	267	0.425	0.00	25.0	−1.42	0.325	0.00	12.5	0.08	0.200	0.04	0.0	−3.83	1.50
155	268	0.425	0.00	25.0	−1.55	0.325	−0.02	0.0	0.13	0.200	0.04	0.0	−4.12	1.68
156	269	0.425	0.00	22.5	−1.67	0.325	−0.02	0.0	0.03	0.200	0.06	0.0	−4.14	1.70
$Z = 114$ (X)														
158	272	0.000	0.00	0.0	−2.85	0.075	0.00	0.0	−2.60	0.175	0.06	0.0	−4.24	0.24
159	273	0.000	0.00	0.0	−3.44	0.075	0.00	0.0	−3.08	0.175	0.06	0.0	−4.77	0.36
160	274	0.000	0.00	0.0	−4.14	0.100	0.00	0.0	−3.40	0.175	0.06	0.0	−4.97	0.74
$Z = 115$ (X)														
160	275	0.050	0.00	0.0	−4.22	0.100	0.00	0.0	−4.01	0.175	0.06	0.0	−4.74	0.21
$Z = 116$ (X)														
159	275	0.400	0.00	0.0	−3.22	0.450	0.02	40.0	0.11	0.150	0.04	0.0	−3.98	3.33